Clean.
Efficient.
Transparent.

Kappa **Mykron**® The fine dust filter

THE
FUTURE
HAS ZERO
EMISSIONS

kappa

E

What is clean air?

Who determines what is clean and what is not?

It was time,

to redefine
the

ANSWER.

kappa

QUESTION:

How is it possible to filter extremely fine dusts in the toughest industrial use with high efficiency and save energy in the process?

ANSWER:

With Kappa Mykron®.
The modular filter system for separating industrial fine dusts.
With 30% improved filtration efficiency of particles smaller than 0.4 µm.

Kappa Mykron®
Never before was it possible to clean so much air with so little energy.

For smoke and fine dust it is the benchmark for decades to come.

The revolutionary Kappa Sequence Dedusting technology enables filtration of smoke and fine dust to a particle size of just a few nanometres, thus generating unrivalled clean air. The applications are varied: from emissions captured directly at the source to diffuse emissions and through to in-hall air cleaning.

30% improved filtration of fine particles
Up to **35%** energy savings
100% transparent

30% improved filtration of fine particles: [1]
Unlike conventional filters with compressed air cleaning systems, the patented Kappa Sequence Dedusting cleaning technology inhibits the airflow through the filter element immediately during and after dedusting. The so-called „peak effect", which refers to dust penetration through the filter material during dedusting, is prevented. The peak effect results from the widening of the pores of the filter element due to the blast of compressed air and the flow reversal through suction that occurs immediately after the blast of compressed air.
Not so with the Kappa Sequence Dedusting cleaning system. Here, the filter element is removed from the air stream during dedusting.
The result is a 30% improvement in the filtration of fine particles under 0.4 µm.

Up to 35% energy savings: [1]
With the Kappa Sequence Dedusting cleaning system, even fine dust can be effectively cleaned from the filter surface. This maintains system resistance and, as a result, power consumption is kept at a low level. The Kappa Nano+ filter elements support this perfectly.
Equipped with a special nano-surface structure, they have been developed over many years by Kappa for surface filtration.
The result is reduced energy consumption by

27% for in-hall air cleaning
35% emission capturing directly at the source and
33% for process air purification.

100% transparent:
The clean gas area of the Kappa Mykron is completely visible through large service doors made of safety glass.
Each Kappa Nano+ filter element can be visually checked individually without effort.
All functions are transparent. Through the use of safety glass, the dedusting pulse is also optimally insulated.

[1] The values compare the Kappa Mykron with a conventional cartridge filter unit under same conditions and correspond to the real results of numerous installations. The actual values are unique for each system.

M 212

M 210

M 208

M 206

M 204

M 112

M 110

M 108

M 106

M 104

K8

K6

K4

Businesses grow with their responsibilities.

Kappa Mykron® **expands too.**

The design of the Kappa Mykron is based on a consistent modular system. The individual elements are assembled at the factory to precisely fit a filter tower. Complex installation and electrical work on-site is not required. Only the filter supports and the dust discharge need to be assembled on site.

The modular system allows the creation of units of any size. Even subsequent expansion is possible upon request, up to a maximum of 12 module rows above one another. For larger air volumes, several filter towers can be joined to form a large-scale plant. This can service economically air filtration from 5,000 to more than 250,000 cubic meters of air per hour.

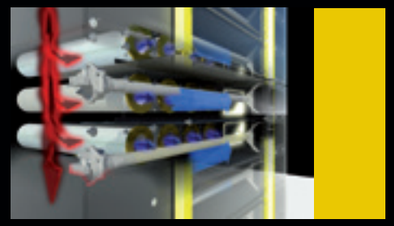
The compact version requires no on-site installation work at all. The complete compact system integrates a high-performance radial fan, a silencer and electrical and control technology. The connection power of the compact design ranges from 5.5 kW up to 22 kW - unrivalled performance in a compact form.

Kappa Sequence Dedusting® Our purity law.

Kappa Mykron uses a constant air flow, directed from the top down, which flows evenly around all Kappa Nano+ filter elements.
The fully automatic filter management system permanently monitors the operating states. As the resistance increases,
the on-line cleaning process begins in accordance with the patented Kappa Sequence Dedusting cleaning processes. In this process,
one filter row each is decoupled from the filter operation successively from top to bottom, while the remaining filter rows remain active.
Then the dust cake of the decoupled filter row, which has accumulated on the filter surface, is cleaned off from the filter surface by a low pressure air pulse. Since the flow through the filter elements has been interrupted, the cleaned fine dust cannot be drawn back to the filter surface.
The permanent flow, directed from top to bottom in the filter, captures the cleaned dust and forcibly transports it downwards.
Subsequently, the decoupled filter row is automatically reintegrated into the flow process.
This cleaning process runs automatically from top to bottom.

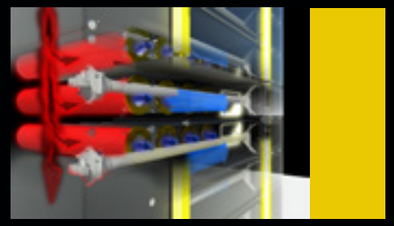
Through the Kappa Sequence Dedusting cleaning processes
the air flow through the filter remains constantly high, and the air resistance in the filter low.

System start:

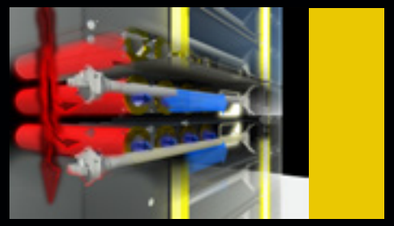


- Constant, downward airflow from the top (red arrow: crude gas flow).
- All filter rows are active (blue arrows: clean gas flow).
- Kappa Nano+ filter elements are free of fine dust (white coloured filter elements).

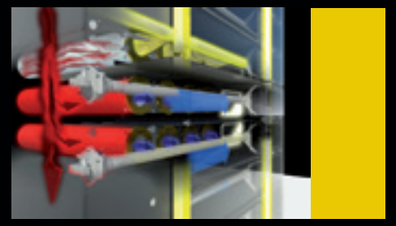
Cleaning Row 01:



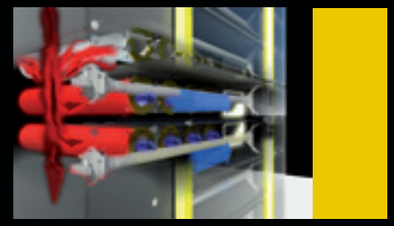
- Constant, downward airflow from the top (red arrow: crude gas flow).
- All filter rows are active (blue arrows: clean gas flow).
- Kappa Nano+ filter elements with dust (red coloured filter elements).



- Row 01 disk valve is closed.
- Air flow through row 01 is interrupted (no blue arrow).
- Crude gas flow passes the filter elements in Row 01 (red arrow).

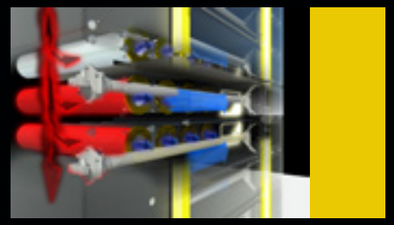


- Row 01 is cleaned using a pressure impulse (yellow compressed air pulse).
- The fine dust is cleaned off the filter material.

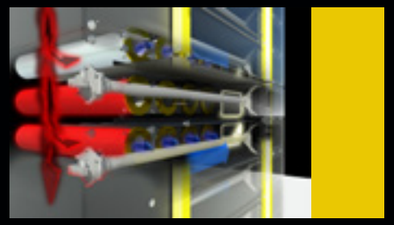


- The removed fine dust is captured in the ambient flow (red arrow) and transported to the filter elements below.
- The Row 01 filter elements are again free from fine dust (white colour).

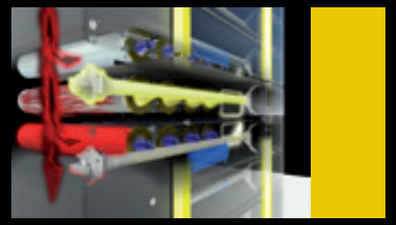
Cleaning Row 02:



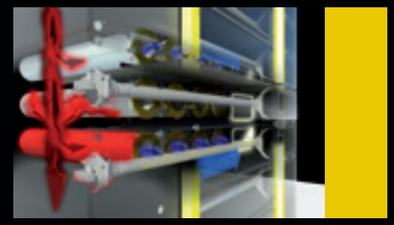
- Constant, downward airflow from the top (red arrow: crude gas flow).
- All filter rows are active (blue arrows: clean gas flow).



- Row 02 disk valve is closed.
- Air flow through row 02 is interrupted (no blue arrow).
- Crude gas flow passes the filter elements in Row 02 (red arrow).

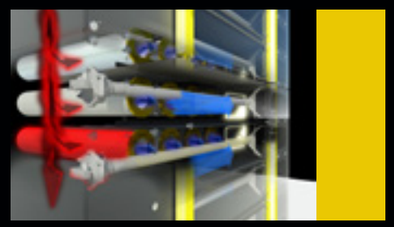


- Row 02 is cleaned using a pressure impulse (yellow compressed air pulse).
- The fine dust is cleaned off the filter material.

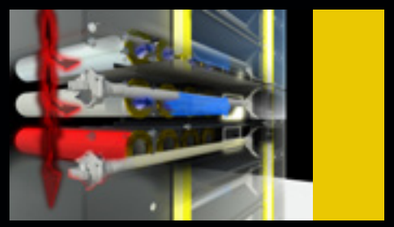


- The removed fine dust is captured in the ambient flow (red arrow) and transported to the filter elements below.
- The Row 02 filter elements are again free from fine dust (white colour).

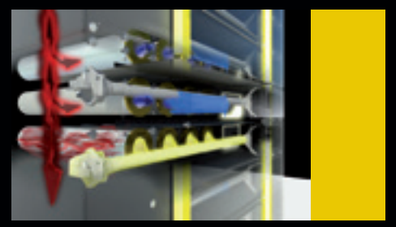
Cleaning Row 03:



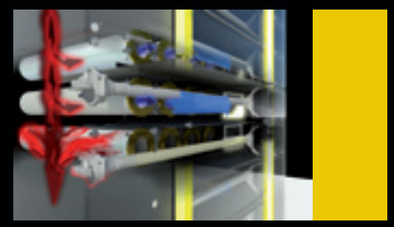
- Constant, downward airflow from the top (red arrow: crude gas flow).
- All filter rows are active (blue arrows: clean gas flow).



- Row 03 disk valve is closed.
- Air flow through row 03 is interrupted (no blue arrow).
- Crude gas flow passes the filter elements in Row 03 (red arrow).

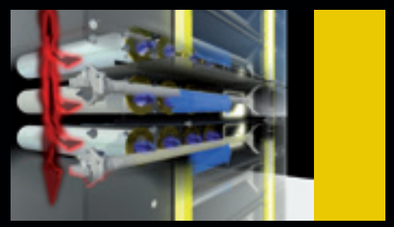


- Row 03 is cleaned using a pressure impulse (yellow compressed air pulse).
- The fine dust is cleaned off the filter material.



- The removed fine dust is captured in the ambient flow (red arrow) and transported to the filter elements below.
- The Row 03 filter elements are again free from fine dust (white colour).

Cleaning completed:



This cleaning process runs automatically in a downward sequence from the top until all installed filter rows are cleaned.

- Constant, downward airflow from the top (red arrow: crude gas flow).
- All filter rows are active (blue arrows: clean gas flow).
- Kappa Nano+ filter elements are free of fine dust (white coloured filter elements).

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