# Exhaust air cleaning, Energy recovery and Supply air conditioning in one system.

#### Kappa MTA<sup>™</sup>

Integrative. Innovative. Individual.

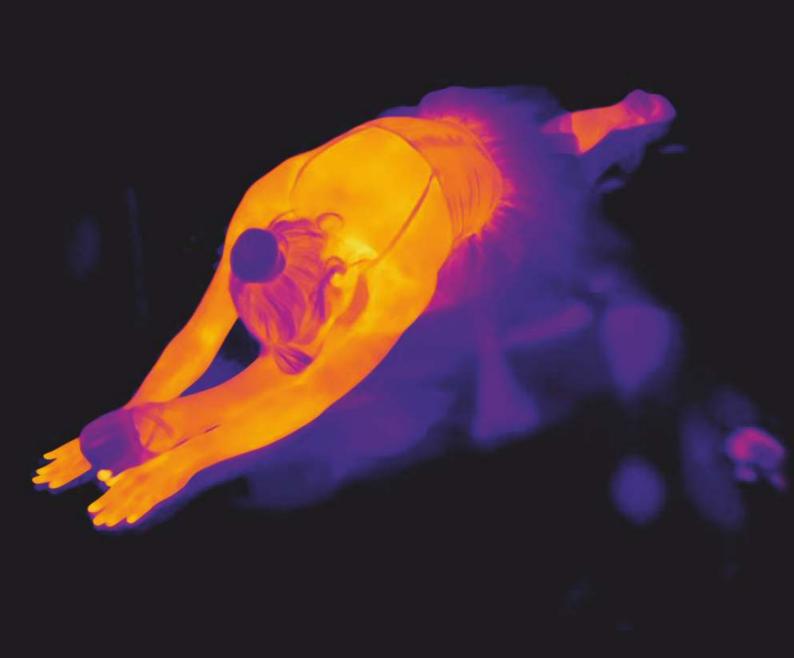






# Exhaust air, energy and supply

affect each other – positively and well as negatively.



And yet they are often treated separately.

The **function** suffers and the **efficiency** decreases.

# It is time

to bring together what belongs together.





#### with

Kappa MTA<sup>™</sup>, the air treatment system for industry that combines exhaust air treatment, energy management and fresh air treatment in one unit. The exhaust air cleaning and air treatment station Kappa MTA<sup>™</sup> represents a completely new concept in industrial air technology.

MTA stands for "Modular Technology for clean Air" and features a unique and sophisticated ventilation module concept.

### Kappa MTA<sup>™</sup> stands for:

#### Integrative.

The Kappa MTA<sup>™</sup> exhaust air cleaning and air treatment station was developed for tough industrial applications. All air technology requirements are integrated in one system, regardless of whether it is the cleaning of industrial exhaust air, the recovery of excess heat or the treatment and temperature control (efficient heating and cooling) of fresh air.

#### Innovative.

The Kappa MTA<sup>™</sup> exhaust air cleaning and air treatment station is equipped with the best available techniques for efficient and economical air treatment. The design and the equipment are the result of years of research and our experience in practice.

#### Individual.

The individual basic exhaust air, energy and fresh air modules are configured individually depending on the application and requirement. Like no other air treatment system, it makes it possible to respond individually to the respective task by simply adapting the design of the individual modules. Entire modules can even be omitted if they are not needed.









# 5,000 bis über 125,000 m<sup>3</sup> per hour in one unit

## Kappa MTA<sup>™</sup> is modular.

The Kappa  $MTA^{M}$  is pre-assembled at the factory in units that are easy to transport and fit precisely. They can be assembled quickly and safely on site. The modular system enables the realisation of plant sizes up to an air flow rate of 125,000m<sup>3</sup>/h in one module unit. For even larger amounts of air, several units can be combined to form a large-scale plant.

# With Kappa MTA<sup>™</sup>, the requirements of industrial exhaust air, energy & ventilation technology can be integrated into one system.

#### Exhaust air base module.

The exhaust air cleaning unit often forms the core of the Kappa MTA<sup>™</sup> exhaust air cleaning and air treatment station. The sophisticated filter design and the separation mechanisms used are the result of intensive research work and practical experience in dealing with critical emissions. Depending on the emissions to be separated, the necessary modules are individually assembled. The following units are available:

- + Separation unit for dust and fine dust (with and without automatic dedusting)
- + Separation unit for oil and cooling lubricant mist, release agent emissions etc. (with and without automatic dedusting)
- + Automatic compressed air, washing or rinsing unit
- + Separation unit for gaseous emissions and for odour neutralisation

#### **Energy base module.**

Due to production-related thermal flows, usually there is a considerable amount of excess heat removed with the exhaust air. The Kappa MTA<sup>™</sup> systems optionally allow complete integration of a high-quality heat recovery module in the system. Through the high filtration of the upstream filter levels, the use of high-efficiency heat exchangers is made possible.

- The necessary modules are individually assembled depending on the requirements. The following units are available:
- + Heat recovery unit with direct heat transfer for low temperature up to 60 °C
- + Heat recovery unit with direct or indirect heat transfer for medium temperatures up to 140 °C
- + Heating and cooling units for temperature control of fresh and supply air (all geothermal and solar energy sources as well as conventional heat and cold generators can be easily integrated)

#### Fresh air base module.

In order to supply industrial halls with fresh air, the Kappa MTA<sup>™</sup> systems can be equipped with a supply air / fresh air section. Fresh air is sucked in from outside and cleaned of atmospheric dust by means of fabric filter stages. The fresh air is then conditioned as required (heated, cooled, humidified, dehumidified, etc.).

#### Kappa Zeromatic<sup>®</sup> A central automation solution for all functions.

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## Kappa MTA<sup>™</sup> uncompromising for your benefit.

#### Integrated approach for optimum function.

All requirements for ventilation and energy technology are compactly integrated in one system. All functional units (exhaust air cleaning, energy recovery and energy technology, as well as fresh air treatment) work hand in hand and thus increase the overall function.

#### A central automation solution – everything centrally in view.

The Kappa Zeromatic<sup>®</sup> is one of the most modern automation solutions and differs significantly from conventional controllers for ventilation units (e.g. DDC controllers, among others). Kappa Zeromatic<sup>®</sup> ensures optimum control, regulation and automation by combining the automation of all functional units in one central control unit. It represents a full service unit with a library of hundreds of standardised and parameterizable function blocks and a large number of assistance systems for economical and functionally reliable operation. The library contains function blocks from the areas of exhaust and process air, ventilation, air conditioning, energy recovery, energy efficiency, safety and comfort, etc.

#### Optimum economy: energy recovery, efficient heating and cooling.

Kappa MTA<sup>™</sup> is energy efficient, makes excess heat usable and provides economical heating or cooling. All state-of-the-art heating and cooling systems can be easily combined with the MTA – Geothermal energy (well water), solar thermal energy, heat pumps and above all.

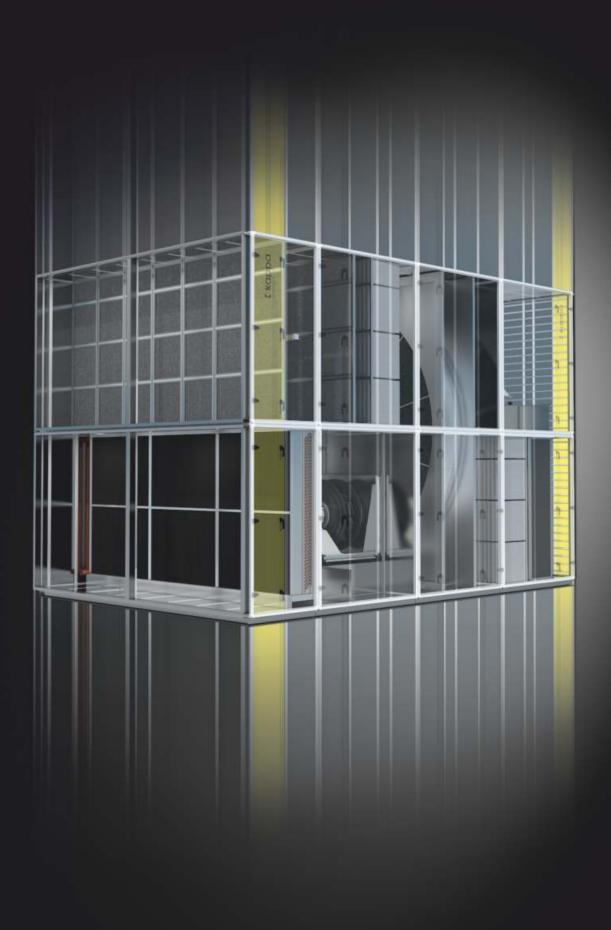
#### safety and comfort.

Optimum ease of maintenance and safe access to all maintenance areas.

#### Sustained value.

Long lasting, high quality and durable industrial design.

The Kappa MTA<sup>™</sup> is not a ventilation system within the meaning of Regulation (EU) No. 1253/2014 Article 2, as it removes material or energy loads released from industrial processes (process air system). The loads represent the dominant factor for the design and operation and not the exchange of used air from a building, as is usually the case with a ventilation system.



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