

Exhaust Air Filtration & Heat Recovery for Stenter Frames

Clean Air.

Save Energy.

1. Client application

2. Our solution

3. The result

KMA Heat Recovery System for heating air & water

Double heat recovery for double efficiency.

Through the energy recovery of 720 kW per hour more than 71.000€ of annual energy costs could be saved and reduced the CO₂ emissions by more than 330 tons every year.

With an amortization period of 2 years the following energy savings benefit the operating result.

- Lower energy costs due to reduction of energy consumption of the stenter frames
- Heating of process water (e.g. for dye-works)



Client application

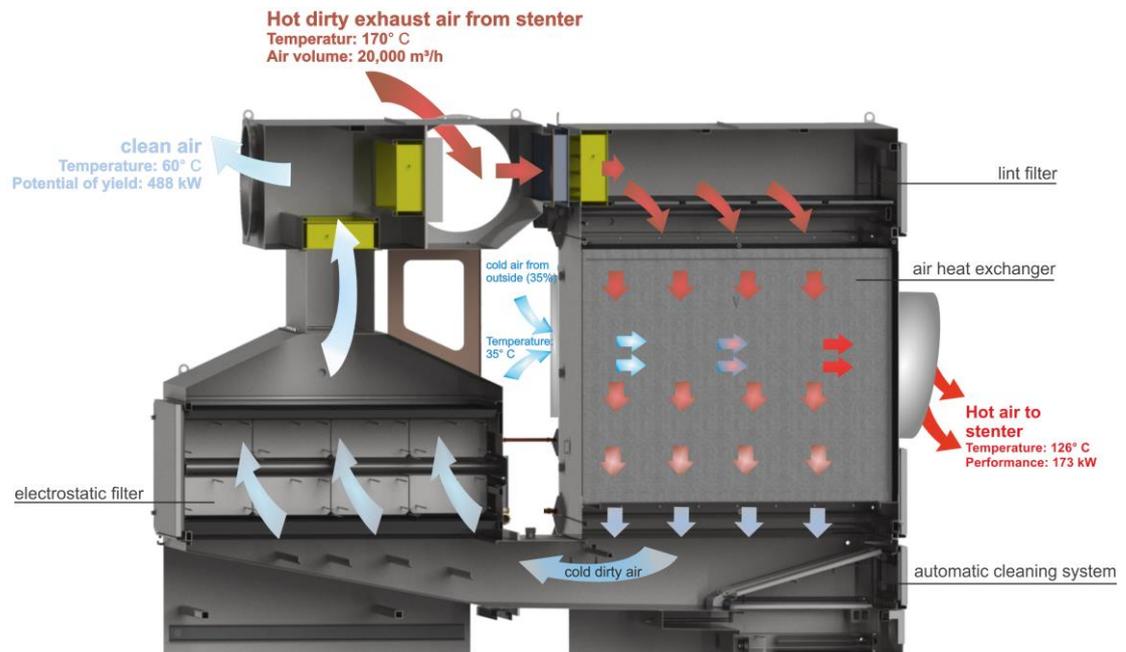
Heat recovery reduces energy consumption of stenter frames

A customer from Turkey processes many types of different textiles in his production plant.

He was looking for an energy-efficient way of heat recovery and exhaust air purification for his new stenter frame with an exhaust air volume of 30.000 m³/h. The goal was to reduce the high energy consumption of

the stenter frame and to use the valuable heat from the exhaust air.

The temperature of the exhaust air was 180°C on average.



Our solution

Heat energy recovered for the stenter frame

For the customer two ULTRAVENT 20.000 filter systems were equipped with double electrostatic filter and double heat exchanger.

The KMA ULTRAVENT® filter system makes use of the valuable waste air in an energy-efficient manner. The integrated heat exchanger extracts thermal energy from the hot exhaust

air, which is utilized for follow-up processes.

The recovered heat is employed to heat up the incoming supply air for the stenter frame.

This reduces the high energy consumption of the stenter frame by more than 1.800 € per week.

In addition, the washing water for the dye-work is also heated by heat recovery system.



The result

Lower energy consumption means lower costs:

- ✓ The energy recovery of this filter system amounts to 720 kW per hour.
- ✓ The saving of energy realizes a reduction of energy costs by more than 71.000€!
- ✓ The profitable heat recovery led to an amortization period of 2 years.
- ✓ The following energy savings benefit the operating result of the company.

Filter modules

In KMA ULTRAVENT® systems, various module components can be integrated for the separation of smoke as well as the recovery of process heat. The ULTRAVENT® systems are available in two versions.

Which version is used, depends on the required module components and space specifications

Tower



Tandem

