

FiCon-Box

Dust separation and condensing technology
brought to the point



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The combination of the FILTERBOX with the TurbuFlexS CONDENS flue gas heat exchanger in a single housing enables the flue gas cleaning and heat recovery with condensing technology in one unit. The solution is space-saving, efficient and inexpensive and is suitable for boiler outputs of up to approx. 300 kW*.

With a joint type test of the FiCon box with the biomass boiler, the specifications of the BEG/BAFA subsidies** can be met.

The electrostatic fine dust separator is ideally installed directly behind the firing nozzle in the flue gas section. It is characterised by its rectangular and compact design. The FILTERBOX consists of individual cassettes, the number and design of which can be adapted to the desired output range of the heat generator and its special requirements. The functional principle is simple:

High-voltage electrodes are used to separate the fine dust particles produced during wood combustion. The insulators are mounted in a pipe system so that they are protected from the direct flue gas flow. Cleaning is fully automatic. There are nozzles on the individual modules through which water can be sprayed to remove the fine dust deposits. The cleaning interval is determined according to the operating intensity of the boiler and the fuel quality. This ensures trouble-free operation is ensured.

The condensing heat exchanger TurbuFlexS-300 Condens can extract the remaining heat from the flue gas. A total of four Turbu-FlexS-300 Single heat exchangers are arranged in parallel and flowed through by the exhaust gas. This condensing variant uses the latent heat of the flue gas and condenses the water content of the wood fuel content of the wood fuel. The condensate forms in particular on the surface of the pipe coil and cleans the flue gas of undesirable pollutants. Soot particles and fine dust are thereby automatically discharged downwards through the siphon into the drain as a result of gravity.



The advantages:

- Compact design
- Low energy consumption
- Separation efficiency up to 80%
- Automatic filter cleaning and cleaning detection
- Retrofittable
- Low wear and low maintenance
- Power ratings: up to 300 kW



- * The power input limit depends on the flue gas temperature entering the heat exchanger and the water temperature. In individual cases, an application-specific calculation is required

**** Biomass heating systems (Source BAFA)**

- From 1 January 2023, the dust emission limit is reduced to 2.5 mg/m³.
- Increase in seasonal space heating utilisation rates (ETAs) for biomass heating from 78% to 81% from 1 January 2023.
- Biomass heating systems must be combined with a solar thermal system or a heat pump

Field of application:

Due to its compact dimensions, the Schröder FiCon-Box can be used both for initial equipment and for retrofitting solid fuel firing systems. The combi unit generates a very low pressure loss and thus enables problem-free operation.

The FiCon-Box scope of delivery consists of the following components:

Fine dust separator and heat exchanger with integrated bypass (V4A 1.4404 as well as 1.4539 in the wet area), installation legs and electronics box with display for control, parameterisation and display.

Technical data:

- Integrated housing for the electrostatic separator and the downstream TurbuFlexS-300 box unit
- Full bath pickled, insulated housing (material 1.4404 or 1.4539 according to EN 10088-2) with flue gas connection DN 300 mm
- Integrated square frame to accommodate the both units as well as height-adjustable feet

- Max. Flue gas temperature: 250°C
- Internal pressure loss: Approx. 20Pa

Fine dust separation by means of electrostatic fine dust charging by means of a high-voltage electrode (HV)

- Input voltage of high-voltage unit 230V, 50Hz, ~
- Max. Power consumption: 150 Watt
- Max. Electrode voltage: 30 kV

Water cleaning

- Regulated automatic filter and electrode cleaning as well as heat exchanger cleaning by means of water according to cycles and differential pressure measurement.
- Required water flow pressure: 3 - 5 bar
- Water connection: 3/4".
- Max. Degree of hardness: 20 fH°
- Water drain: stainless steel siphon DN50

Control and regulation unit with high-resolution display

- Power supply: AC 230 V / 50 Hz, ~

TODAY THE FUTURE



The name „Schröder“ stands for modern exhaust technology made of stainless steel. In the last two decades the company has undergone rapid development and is one of the leading manufacturers in Germany.

Schröder's development activities have always been based on a concept that produces ecologically sound and efficient products. Schröder has thus since the foundation of the company responsibility and ensures a sustainable handling of our resources.

Schröder's motto „The future today future“ accompanies the company every day: Schröder strives to make the world more sustainable with its products.

As a customer, you can protect the environment by using Schröder technology, you can protect the environment you are already making a contribution today to a future. For example, Schröder achieves this with **the automatic butterfly valve Future OptiPa** as well as with the **Schröder Turbu-Flex heat exchanger** and with the use of **Schröder fine dust filters**.

Schröder's innovative technologies ensure that emissions are reduced and thus contribute to active environmental protection. At the same time you also reduce your running costs. This makes it easy for you to be always one step ahead!



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