FUTURE-Refine PT Inside

PARTICULATE TRAP INSIDE

Electrostatic particle separator for the reduction of fine dust in plants of up to 50 kW of thermal output

SCHRÄDER
created by KWK PLAN

FUTURE-Refine PT Inside

Key benefits:

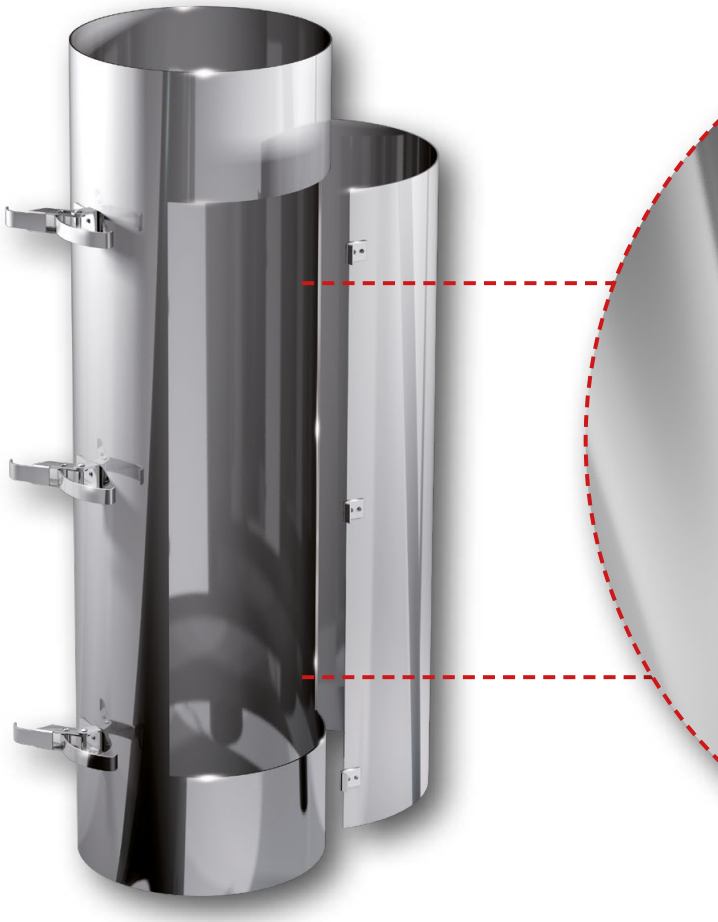
- Nearly no draught or pressure loss
- For small medium wood combustion plants until 50 kW of thermal output
- For fuels, pellets, logs, or wood chips
- Installation in the boiler room – installation position 3° to 90°
- Easy assembly – Plug and Play – plug-in – factory-tested
- User or/and the chimney sweeper can easily clean it without disassembly due to its handy swivelling mechanism
- High degree of separation of up to 95% (depending on the system performance and dust load)
- Low maintenance and operating costs
- High availability
- Excellent price / performance ratio
- Automatic operating mode
- Robust design
- BAFA eligible

The Schräder FUTURE-Refine PTInside is an electrostatic fine dust separator that significantly reduces the emission of fine dust from wood-fired combustion plants which is hazardous to health. The separator is suitable for firing rates of up to 50 kW (exhaust gas volume up to 80 m³/h) and exhaust gas temperatures of max 250°C. Installation is done easily and quickly. The separator is mounted as connecting element between boiler and exhaust gas system and is ready to be plugged in. The separator and the control are separated from each other by a 2 m -long connecting line. The control unit is installed on the wall near the separator. Only one safety socket for 230/240 V is needed. The power consumption of the separator is 30 W during operation.

If fired, the PTInside automatically switches on via an integrated temperature probe. Using electrostatic forces, the soaring particulates are led to the inner wall of the chimney and deposited. During the next cleaning process, this fine dust can then be removed and disposed of. Dust removed in this way impacts neither environment nor health. After the end of firing, the separator automatically switches over to stand-by operation with a power consumption of less than 1 W. The working time of the separator can comfortably be read on a clearly visible operating hours counter.

All exhaust gas carrying parts of the separator consist of high-grade 1.4404 stainless steel, the individual components and the control system come from known, proved applications of the Schräder filter technology.

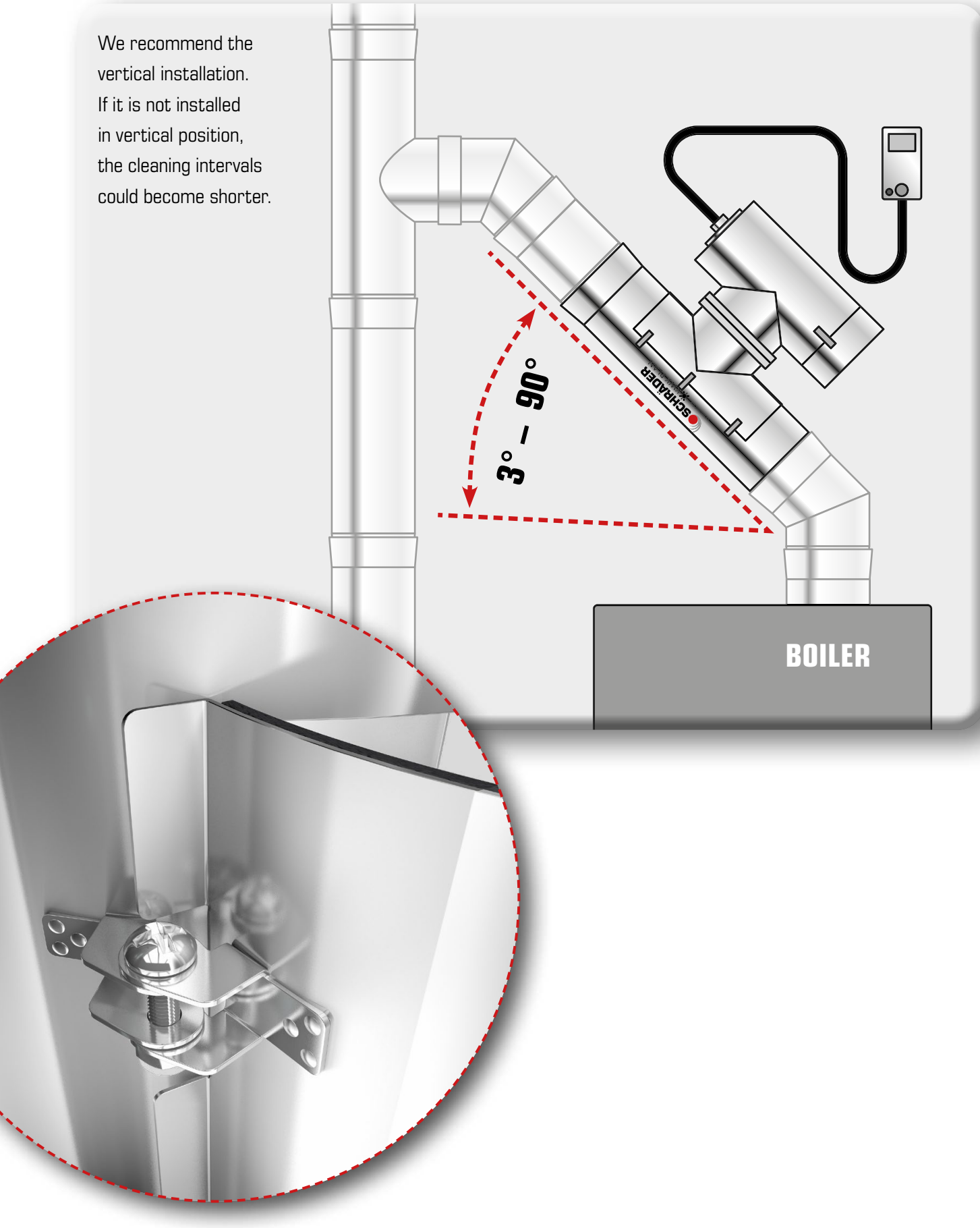
Easy cleaning is guaranteed due to the swivelling mechanism of the separator. For this purpose, the tension locks are released and the whole filter is swivelled out of the exhaust gas pipe. Cleaning takes place with brushes and ash vacuum cleaner and takes some minutes only. After cleaning, the filter is swivelled back again and the tension locks are closed. Using an exchangeable cover the separator can be set-up preliminarily, or it is removed for cleaning or repair while the system can be operated further. (Fig. below)



The PTInside is suitable for new installations as well as for retrofitting of existing plants. Due to the swivelling mechanism, the direction of installation can be selected flexibly between 3° and 90°.

The ideal position is the 90°direction (perpendicular) with removeable soot trap. This provides the longest time periods between the cleaning procedures.

We recommend the vertical installation. If it is not installed in vertical position, the cleaning intervals could become shorter.



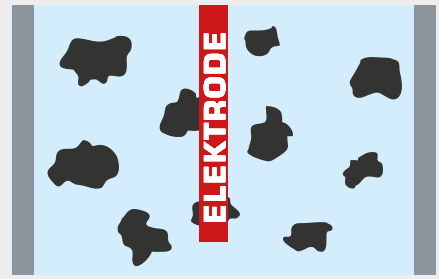
The fine dust filters made by Schräder are based on the electronic principle:

Dust emissions caused during the combustion of wooden pellets, firewood, or woodchips get in the exhaust gas tube together with the exhaust gas.

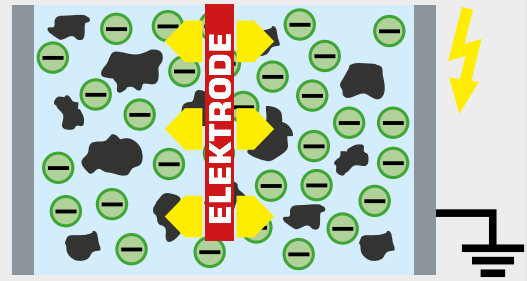
In the FUTURE-Refine PTInside a high-voltage electrode emits electrons that move towards the chimney wall due to the electrostatic forces. In the process, the particulates are charged and also moved to the chimney wall. There, fine dust accumulates and agglomerates to form coarse flakes. These deposits are removed by the chimney sweeper during the regular cleaning.

Particulates adhere to the separation surface and the electrode. With an increasing dust load of the electrode, the intelligent regulation adapts the flow rate in order to keep the separation performance.

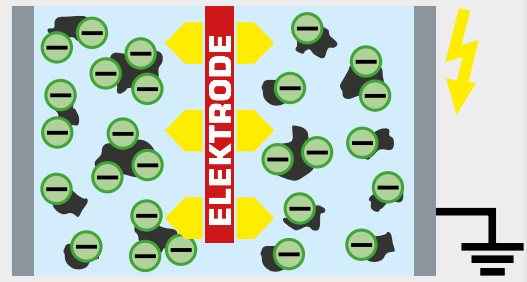
01 The particulates flow with the exhaust air through the exhaust gas channel.



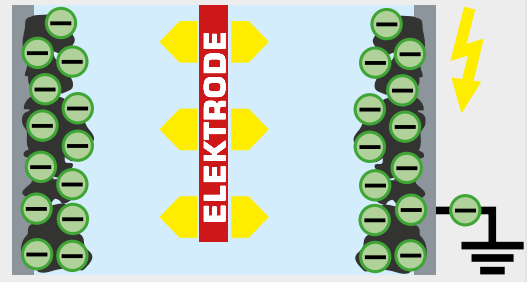
02 A high-voltage electrode emits electrons.



03 Due to electrostatic forces, these electrons move towards the chimney wall. This charges the particulates and moves them towards the chimney wall.



04 Fine dust accumulates on the chimney wall and agglomerates to form coarse flakes. The chimney sweeper removes these deposits during cleaning



ALREADY TODAY
THE FUTURE

SCHRÄDER ABGASTECHNOLOGIE

The name “Schräder” stands for modern exhaust gas technology made of stainless steel. During the last two decades, the company developed rapidly and now it ranks among the leading manufacturers in Germany.

Schräder’s development works have always been based on a concept that creates ecologically reasonable and efficient products. With this, Schräder has already been assuming responsibility since the foundation of the company and cares for the conservation of our resources.

Schräder’s motto “Already today for the Future” goes with the company every day: Schräder is strives to sustainably develop the world with its products.

As our customer, you will be able to save the environment by applying the Schräder technology - with this, you contribute your share for a future worthy to live already today. For instance, Schräder succeeds with the **automatic butterfly valve Future OptiPa** as well as with the **Schräder heat exchanger TurbuFlex** and with the application of the **Schräder Fine Dust Filters**.

Schräder’s innovative technologies ensure that emissions are reduced and with this, they to contribute to active environment protection. By the way, furthermore you reduce your running expenses. So, it comes easy to you always to be one step ahead!

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