



# Wood Stove Filter

## Electrostatic Precipitator (ESP)

- particle filter for removing flue gas particles from wood stoves



Your energy. Optimized.

# ESP Particle Filter for Wood Stoves

- Highly efficient electrostatic precipitator (ESP)
- 95% reduction in number of particles
- 70-75% reduction of total particle mass
- Automatic cleaning function (self-cleaning)
- Integrated chimney fan
- Available in black and steel

## CHIMNEY FAN?

The ESP particle filter comes with an integrated chimney fan in its top portion. A chimney fan is a ventilator that ensures a constant updraught in the chimney, making it easier to light the fireplace as well as helping to prevent the backflow of smoke into the room. Without this reliable mechanical draught, you are at the mercy of the chimney's natural draught which can vary depending on outside temperature, wind and air pressure.



# 95%

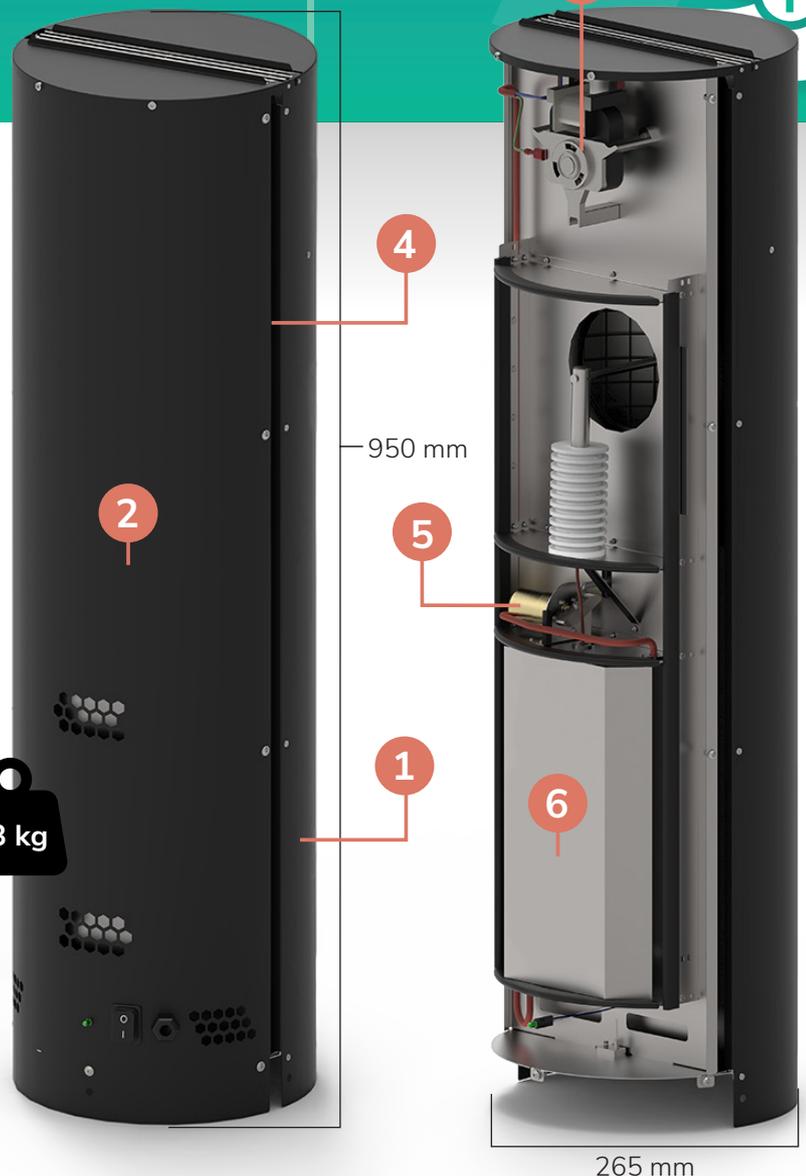
Reduction in number of particles

# 70%

Reduction in total particle mass

## WHY SHOULD YOU REMOVE FLUE GAS PARTICLES?

Flue gas particles have a size less than  $0.1 \mu\text{m}$  which is 1000 times smaller than a human hair. Since the human throat is only capable of capturing particles larger than  $2.5 \mu\text{m}$ , the smaller particles continue to lungs and blood vessels, causing asthma, breathing problems and/or inflammations and are therefore damaging to your health.



The particle filter captures and eliminates both large and ultrafine particles, thus eliminating the health risk.

- 1 Flue gas side
- 2 Technical side
- 3 Integrated chimney fan
- 4 Cooling gap
- 5 Self-cleaning device
- 6 Electronics compartment

The exodraft ESP particle filter is designed to filter out hazardous and ultrafine particles from the flue gas of your wood-burning stove or fireplace.

The particle filter reduces the number of particles by 95% (fine and ultrafine particles) as well as reducing the total particle mass by 70%-75%. Measurements were carried out according to the Norwegian standard NS3058 which corresponds to outside air conditions.

The electrostatic particle filter is installed on top of the chimney, where it is coldest, and uses a high-voltage electrode to charge the particles in the flue gas, causing them to collect inside the filter.

The exodraft ESP particle filter comes with a self-cleaning feature (see below).



Lab test A

## Particle build-up after 75 minutes (1½ kg firewood)



Lab test B



PARTICLE FILTER OFF



PARTICLE FILTER ON

### SELF-CLEANING FUNCTION

The particles are collected inside the filter by electrostatically charging the particles and trapping them inside the filter, where the self-cleaning function of the ESP will cause some of the particles to combust. The remaining particles are released into the chimney to be burnt off, thus eliminating the need for manual cleaning of the filter. Should national law require that the chimney sweep has access to the chimney from the roof, we recommend that a cleaning hatch is installed between the chimney and the filter.

This cleaning hatch is not an Exodraft product and cannot be acquired through Exodraft. Please contact your local chimney sweep for more information on this subject.

### MOUNTING ACCESSORIES

Adapters are available for mounting on steel and brick chimneys, just as there is a flange for stabilization on brick chimneys.



## Who is Exodraft?

Exodraft is a Danish company that manufactures and develops particle reduction, chimney draught and heat recovery systems for various industries and private users worldwide.

## A clear mission:

We want to develop and market particle filters, chimney fans and heat recovery systems of the highest possible quality for the sake of improving both human lives and the environment.

## Comprehensive knowledge:

Our solutions are built on more than 60 years of experience within chimney draught technology as well as extensive knowledge about the relationship between combustion and the draught in the chimney.

## ISO certified quality:

At Exodraft, we constantly optimise and develop our products further. Quality and documentation are two of the cornerstones in the development of our products. We are ISO9001 certified which is why we can document our high quality.

Visit our website for more information:

[www.exodraft.com](http://www.exodraft.com)

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