

Saas-Fee

SAASTAL

Absolutely
free of particulate matter.



Absolutely Saas-Fee.



Welcome to the «Pearl of the Alps»

Pearls are precious. Pearls are desirable. And such pearls are found in the midst of the highest Swiss mountains. Thirteen four-thousand-metre peaks wrap themselves around Saas-Fee and its neighbours Saas-Grund, Saas-Almagell and Saas-Balen like a shell. They give the valley its distinctive name of “Pearl of the Alps”. Saas-Fee is a car-free village, but you can reach it by car or public transport. As part of its sustainability strategy, which is a key component of its 2011-2015 Destination Strategy, Saas-Fee is now extending its efforts to include tackling emissions. Its aim is to become the first particulate-matter-free municipality in the Alps.

Saas-Fee on way to becoming world's first place free of fine dust

The problem of fine dust, often known as fine particulate matter, may not yet be on everyone's lips, but its effects are clear to see. That's why Saas-Fee is waging war on these carcinogenic soot particles with a plan to fit the village's 250 wood-burning heating systems with filters by late 2011. This will make the Pearl of the Alps the world's first fine-dust-free community.

At first glance, fine dust may not seem like a big deal, but its carcinogenic properties make it a ticking time-bomb for our health (see info box). “Saas-Fee is already a holiday destination of unparalleled natural beauty with clean mountain air and a car-pollution-free village, but we now want to go one step further,” says David Graefen, Marketing Director at Saas-Fee / Saas Valley Tourism. Of the 250 wood-burning heating systems in the village, 70 will be fitted with a filter by the end of the year, and the rest of Saas-Fee's chimneys will be modernised in the course of 2011, reducing fine-dust pollution by around 95 percent. Beat Anthamatten, local councillor and president of Saas-Fee / Saas Valley Tourism, has been with the project from the very beginning. He says being green is not enough

to ensure sustainable tourism in the area. In the winter months when air temperatures are inverted – meaning that air temperatures increase with altitude rather than decrease – fine dust can have a particularly negative effect on air quality. Wood-burning heating systems are a major contributor to this air pollution.

One million francs invested

The village presented the ambitious project in November 2009. The glacier village plans to use filters to rid itself of the fine dust and has enlisted the help of Oeko-Solve, a company that produces electrostatic fine dust filters that trap the poisonous soot particles before they exit the chimney. That the idea failed to stir the village's interest in the beginning has nothing to do with the filters' cost. Although a filter and its installation costs 3,000 CHF, the village council and the Saas-Fee tourist office, and Oeko-Solve will take on a third of the cost each, leaving chimney owners with only 1,000 CHF to pay. The village launched a new leaflet to reignite enthusiasm for the project this spring. Its slogan “Ban fine dust from the Pearl of the Alps? Yes, we can!” certainly worked.

Installation of the filters is now set to get off to a flying start this year, and the entire investment will add up to around 1 million CHF. According to Anthamatten a third of the work will be carried out by local businesses, which will benefit the region's economy.

The first step has been taken and Saas-Fee is well on the way to becoming the first fine-dust-free community on the planet!

Dangerous dust

info

Fine particulate matter, or fine dust, is a physical-chemical mix of minuscule solid particles and heavy liquid droplets. It is emitted by a number of sources, including wood-burning heating systems and vehicle traffic. The carcinogenic soot in this mixture is particularly problematic as we can inhale it deep into our lungs, allowing it to flow into the blood and therefore our organs.



OekoTube

OekoTube Easy and Clean.

The micro-dust filter for all wood fires.

Simple. Sustainable.

After hydroelectricity, wood is the second most important renewable energy source in Switzerland. Heating with CO₂-neutral wood is climate-friendly and promotes the regional economy. Thanks to the OekoTube, the burning of wood is now harmless, even though hazardous microscopic dust particles are released.

The OekoTube is an electrostatic filter which can vastly reduce respirable micro-particles of soot emissions from small wood-fired stoves (also fireplaces, larger wood stoves, European tiled stoves, pellet stoves, central heating boilers, ...). By using an OekoTube you are making an active contribution to the improvement of local air quality, so both you and your neighbours will benefit. With an OekoTube your heating is environmentally friendly with CO₂-neutral wood – and it also eliminates the dangerous microscopic particles. According to the testing laboratory for wood-fired heating the OekoTube has an officially tested efficiency of 95% and therefore meets the requirements of Air Pollution Control Ordinance (CAO/LRV). That means you are well prepared for the future.

The micro-dust filter OekoTube is suitable for all wood fires with a capacity below 40kW and is mounted on top of the chimney. The OekoTube can easily be fitted to both new and existing wood-heating systems, and no structural changes are necessary inside the building.

Heating with wood.

After hydroelectricity, wood is the second most important renewable energy source in Switzerland.

With the sustainable management of Swiss forests, the currently used amount of wood fuel can roughly be doubled. The use of wood energy for heating is CO₂-neutral and is also environmentally friendly. Heating with local wood also supports the regional economy and creates jobs. For these reasons the use of wood for energy is supported and promoted by the federal government.

Microscopic Soot Particles.

Unfortunately wood creates hazardous microscopic dust particles when it is burnt. For several years, mainly in the winter months, micro-particles of soot have been a daily topic. In inverted atmospheric conditions (a stable warm layer of air above a cold ground-layer), the fine-particle matter in the ambient air vastly exceeds micro-dust limits.

Studies have shown that micro-particles, especially particles with a diameter smaller than 1 micron, are dangerous to our health. These particles pass through the respiratory pathways into the lungs and enter into the bloodstream through the alveoli. Thus, in addition to the lungs, other organs can be affected. The health effects can be coughing, bronchitis, asthma, cardiovascular disease, and even lung cancer.

Air quality.

Through the use of OekoTubes an active contribution to local air quality is made. The filter is ecologically and economically beneficial because, with it, older heating systems can be used longer and are more environmentally friendly.

The benefits for you when you use an OekoTube:

- Heating with wood is good for the climate and contains hardly any microscopic dust
- Better air quality in your environment
- No heating ban for you when limits are exceeded
- Subsidies are available

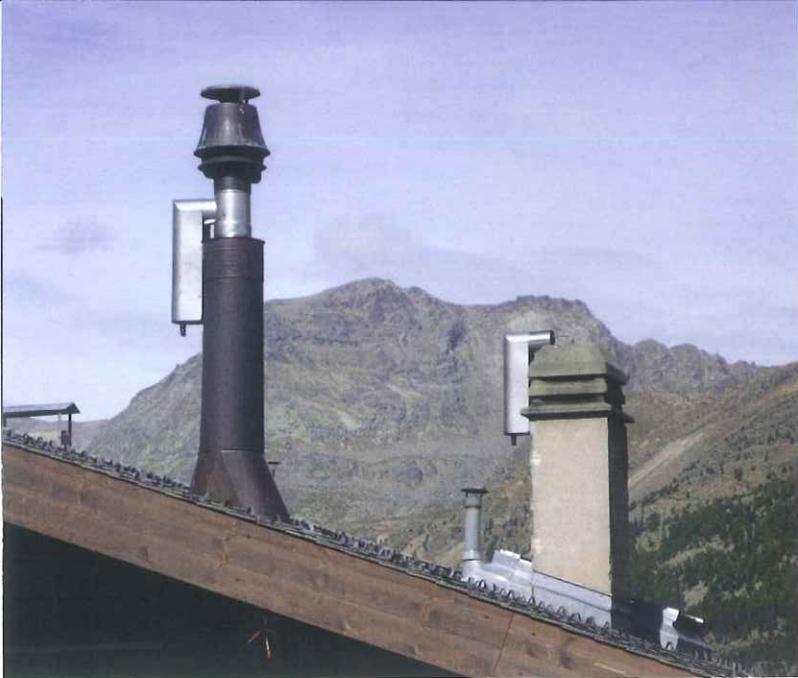
Simple. Natural.

Mosses significantly reduce micro-dust substantially. A combination of features make moss a fine-dust killer: Mosses have millions of tiny leaves. These are negatively charged and all together form a huge surface area. The surface of the moss can thus attract microscopic dust. The OekoTube works using a similar principle.

Advantages.

Electrostatic filters have several advantages over other filter systems like wet scrubbers and conventional dust filter systems:

- Highly effective, even for microscopic particles
- No loss of pressure or flue draft
- Low maintenance and operating costs
- No moving parts, no wear



How it works

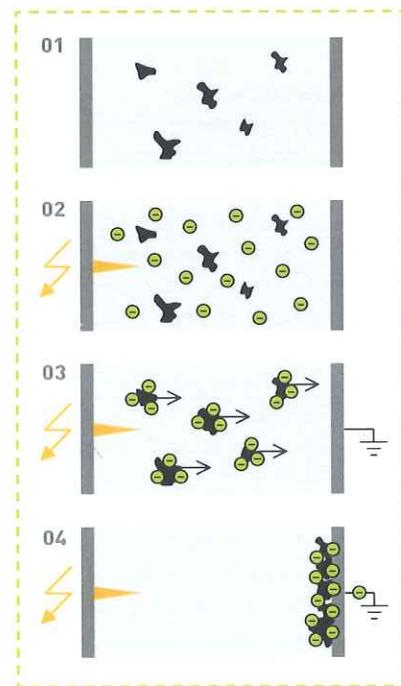
The OekoTube operates on the electrostatic principle. The following illustrations show how the separator works:

01 Micro-particles of soot flow through the flue with the exhaust air.

02 Electrons are released by a high voltage electrode.

03 The electrons move by electrostatic force to the inside chimney wall. The fine dust particles become charged and also move to the wall.

04 The dust accumulates on the chimney wall and clumps into coarse flakes. These deposits are removed in the annual maintenance by chimney sweeps.



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