Filter systems and flue gas cleaning

For household, hazardous, industrial, clinical and contaminated waste combustion systems

There are two ways to filter the exhaust gas.

On the one hand there is the wet and dry washing technology and on the other hand the electrostatic filter technology. For our systems we mainly use the dry washing technology.

For our dry washing technology we can offer ceramic filters and fabric filters. We prefer ceramic filters for our furnaces up to 400 kg/h, as these have a very high filter efficiency on the one hand and a very long service life on the other.

Which of these both filter technologies is suitable is mainly a question of the amount of exhaust gas and the media itself.

For our dry-washing systems we additionally recommend to use a dry-scrubbing-solvent injection system.

These dry scrubbing systems are used to remove corrosive and toxic gases (for example SO2 and HCl) from the exhaust gas.

They are very effective with low investment and operating costs.

The temperature range for the dry-scrubbing solvent should be from 170°C up to 300°C.

In this range the dry-scrubbing solvent can transfer the contents.

Flue gas mixed with dry-scrubbing solvent create a layer on outside surface of the filter and accumulate during operation.

The dust layer causes a pressure drop and a differential pressure measurement indicate necessary cleaning steps.

At a certain differential pressure level the filter will be cleaned by pressure air with a reverse jet cleaning system which clean the filter by a jet impulse and the dust layer on the outside surface of the filter will fall down.

At the bottom of the filter the ash feed by a rotary valve to a big bag or ash container.

The insulation at the outside of filter body keeps it from corrosion, during shut down periods.

The dust inside is contaminated with sulphur and other components.

If the temperature falls below the dew point, corrosion could be happen. Therfor a standstill heater is additionally recommended to protect the housing from corrosion. This heater is only an option, because if it is necessary depends always only on local conditions.

The filter can easily removed when necessary. It can be replaced by operation staff after training.
Please note that each system requires an individual configuration.

Therefore, examples cannot be used for planning purposes, but only serve as rough information.

We always calculate your system individually according to your specifications and requirements.

To protect the environment and to avoid unnecessary transports we would like to point out our license option.

Let’s talk about it.

Thank you.