

LIGNO

COMPACT FILTER



UNIVERSAL AND
ENERGY EFFICIENT

scheuch
TECHNOLOGY FOR CLEAN AIR

PERSUASIVE PERFORMANCE - POINT BY POINT

Based on the high industrial standards set by large-scale LIGNO filtration plants, we have adapted the LIGNO Compact filter series for the performance range from 6,000 to 40,000 m³/h. As a result, plants of this size are also able to fully benefit from our comprehensive expertise in filtration and dedusting technology – especially in the areas of energy efficiency, as well as fire and explosion protection.

Energy Efficient

Scheuch's IMPULS cleaning system is absolutely superior in terms of energy efficiency and operating reliability. The low levels of pressure loss in the filtration plant, as well as the highly efficient integrated fan units, also contribute to the energy savings. However, it is first and foremost the choice of the right plant concept and the optimal dimensioning and layout of the pipe network that are decisive in minimizing the operating costs of an extraction and dedusting plant. It is the interaction between individual, efficiently operating components, as well as an effective overall concept, that make it possible to achieve the best solution – both technically and economically.

Proven Fire and Explosion Protection Concepts

Our certified safety concepts guarantee operators legal security and maximum levels of operating reliability, safety and availability. In addition, we are the only company to offer explosion protection concepts with flame ranges below 5 meters.

Universal Application

With its carefully tiered performance levels and flexible modular design, this filter series is able in its standard versions to cost-effectively cover without additional expense all requirements with respect to size, height and shape, including different discharge variants.

Low Noise Emissions

Depending on where the filtration plant is installed – in an industrial area, a multi-zoned building area and even in the case of night operation – a variety of standardized acoustic insulation packages are available to address the issue of noise abatement.



Low Assembly Costs

The individual component groups are delivered pre-assembled to the construction site. The control cabinet located directly at the filtration plant sends the digital signals from the filter's sensor package to the master control unit via a Profibus interface. This results in fast, cost-effective installation and assembly.

Application

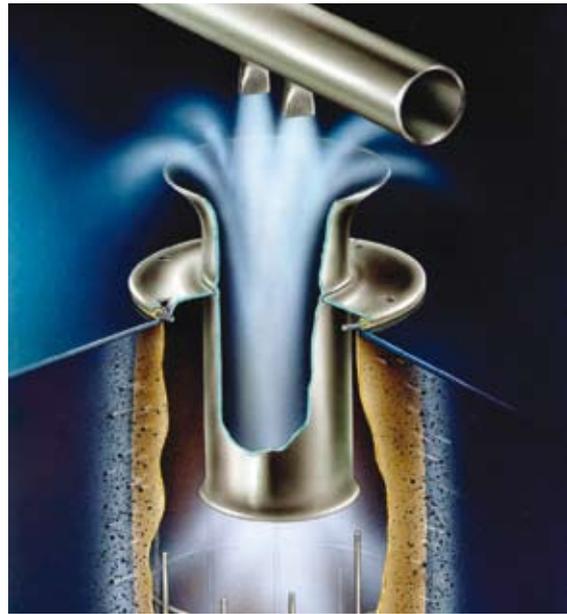
The LIGNO Compact filter series has been specially developed to meet the needs of the woodworking and wood processing industries. It is also well suited for the separation of related dust types including dust from paper, rubber, recycling materials and plastic.

IMPULS CLEANING SYSTEM: EFFICIENT AND DEPENDABLE

The IMPULS cleaning system developed by Scheuch is especially effective and energy efficient. The specially shaped double-jet nozzles deliver a high proportion of secondary air and thus achieve an efficient and very gentle level of cleaning. This results in reduced consumption of compressed air, longer cleaning cycles and thus longer service lifetimes for filter bags. The operating costs for the cleaning of a LIGNO Compact filter are less than 35.00 Euro per year.

Based on our practical experience, we recommend compressed air cleaning systems for filtration plants with air flow volumes starting at 6,000 m³/h. Given the constantly increasing performance requirements of processing machines, changes in the machinery park and the need to run individual machines in two-shift operation, only compressed air cleaning, in contrast to vibration-based or backwash-based cleaning systems, ensures reliable and problem-free operation.

In addition, pressure relief can be implemented on the crude gas side in filtration plants equipped with compressed air cleaning systems.



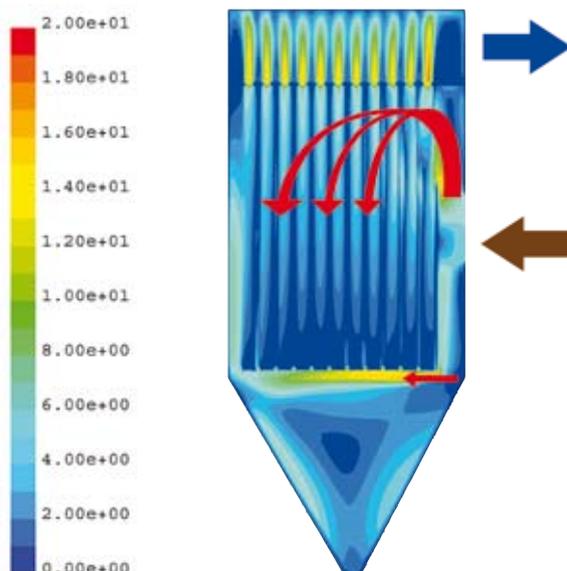
LOW OPERATING COSTS

In addition to the efficient cleaning system, it is above all the pressure loss in the filtration plant and the filter bags that is decisive with respect to operating costs. During the course of developing the series, CFD simulations were used to flow optimize not only the filter casing, but also the incoming flow and the nozzle geometry of the integrated fan units.

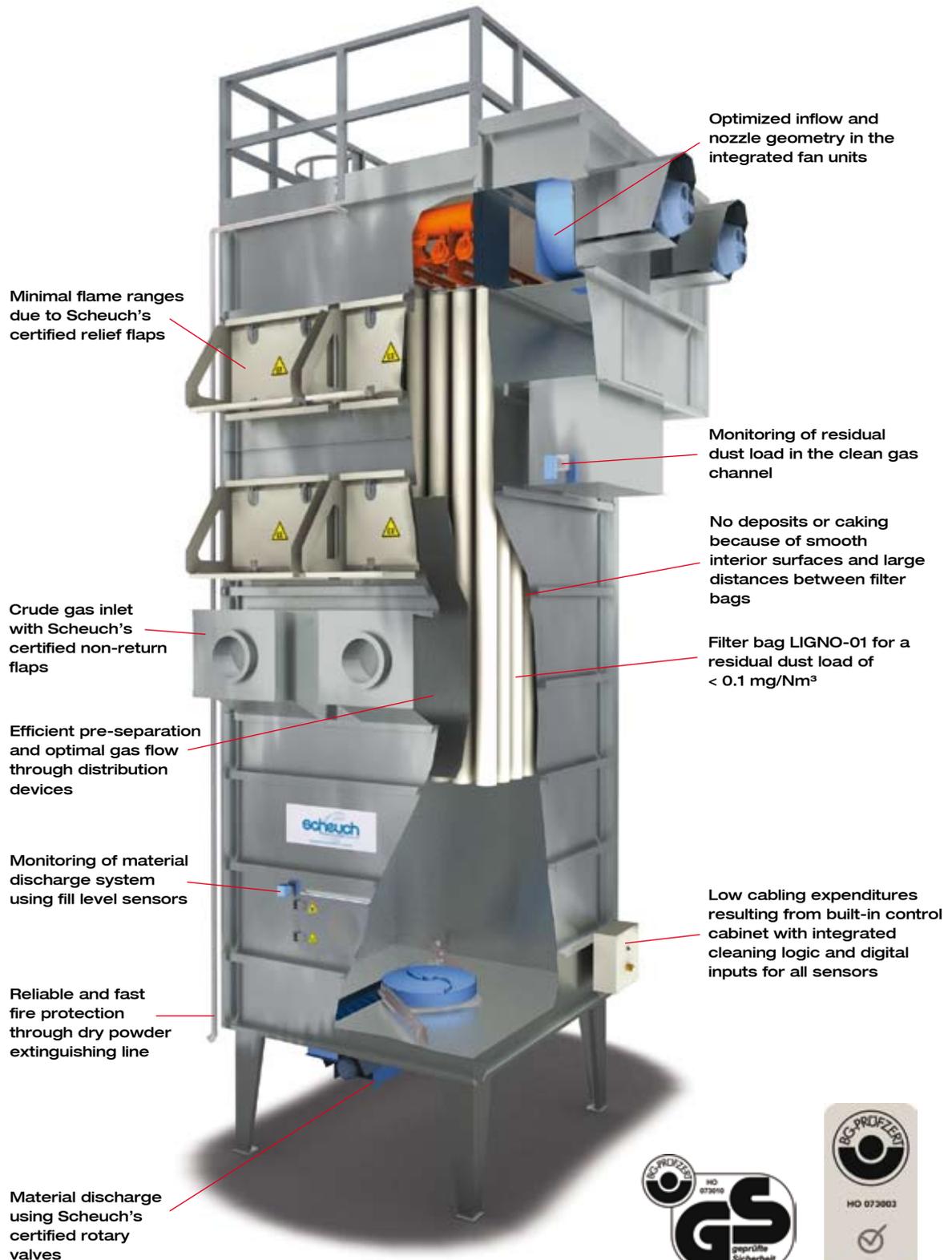
Developed by Scheuch, the filter bag LIGNO-01 also ensures in the case of long service lifetimes a very low filter resistance level because the surface-oriented filtration behavior keeps the dust penetration depth low, which maintains air permeability.

A special distribution device in the crude gas inlet causes the pre-separation of the majority of the chip and dust load and creates a cross-flow above the dust collection container. This prevents the raising of chips and dust that have already been separat-

ed from the air stream. The TOP-DOWN effect supports the downward movement of the cleaned dust particles towards the discharge area.



SOLID AND CAREFULLY ENGINEERED DESIGN



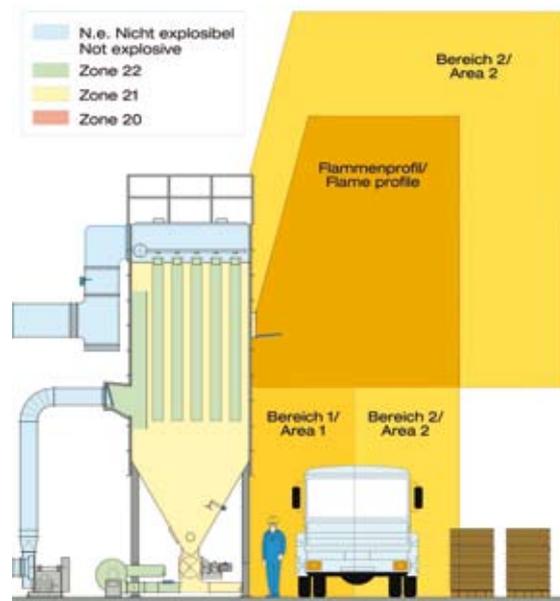
PERFECT CONCEPT FOR FIRE AND EXPLOSION PROTECTION

The effectiveness of our explosion protection concepts with respect to pressure relief, decoupling and safety hazards in external areas was demonstrated and confirmed for the first time on a complete plant under actual operating conditions by the German testing institute, Prüf-anstalt FSA e.V. In addition to the H3 and GS Certification Marks, it includes the ATEX-compliant certified implementation by Scheuch and also documents low flame ranges. The explosion protection concept ROWEK 65 guarantees in the event of an explosion a flame propagation range of less than 5 meters. This makes possible the practical installation of filtration plants, even in cases where space is limited.

Because the design specifies an extremely low explosion pressure, the plant can be re-used in the event of an incident after replacing the filter bags. This results in only short interruptions in operation and low maintenance costs.

In order to spare operators the need to perform for every installation the inspections required for the explosion protection document, Scheuch commissioned an expert assessment by INBUREX Consulting GmbH. It describes the marginal impact

in the remaining danger zone. Vehicle roadways and pedestrian paths, as well as storage areas or a property border in the near vicinity of a Scheuch filtration plant, are permissible. Based on this certification, the German Holz-Berufsgenossenschaft, a wood industry trade association, awarded the GS Certification Mark for the first time to the entire LIGNO filter series.



UNIVERSAL APPLICATION



Bunker



Collection tank



Hopper



Dust barrel



Briquette press



Conveyor system



Silo



Container

COMPETENT AND COMPLETE

LIGNO Filter

Energy efficient and whisper-quiet – the modular filter series for performance ranges from 20,000 to 240,000 m³/h.



SEPAS-Plus

The extraction system with maximal effectiveness guarantees a minimal use of energy.



SELAS-Plus

The extraction system for the perfect surface coating: Spraying – Drying – Grinding – Storage.



LIGNO Pipe Connector Program

Crafted with intelligence – fast, simple, precisely fitting, economical.



Flue Gas Cleaning

Rounding out our product range for the wood processing industry is a complete program for dedusting flue gases generated by boiler plants and for recovering heat from flue gases.



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