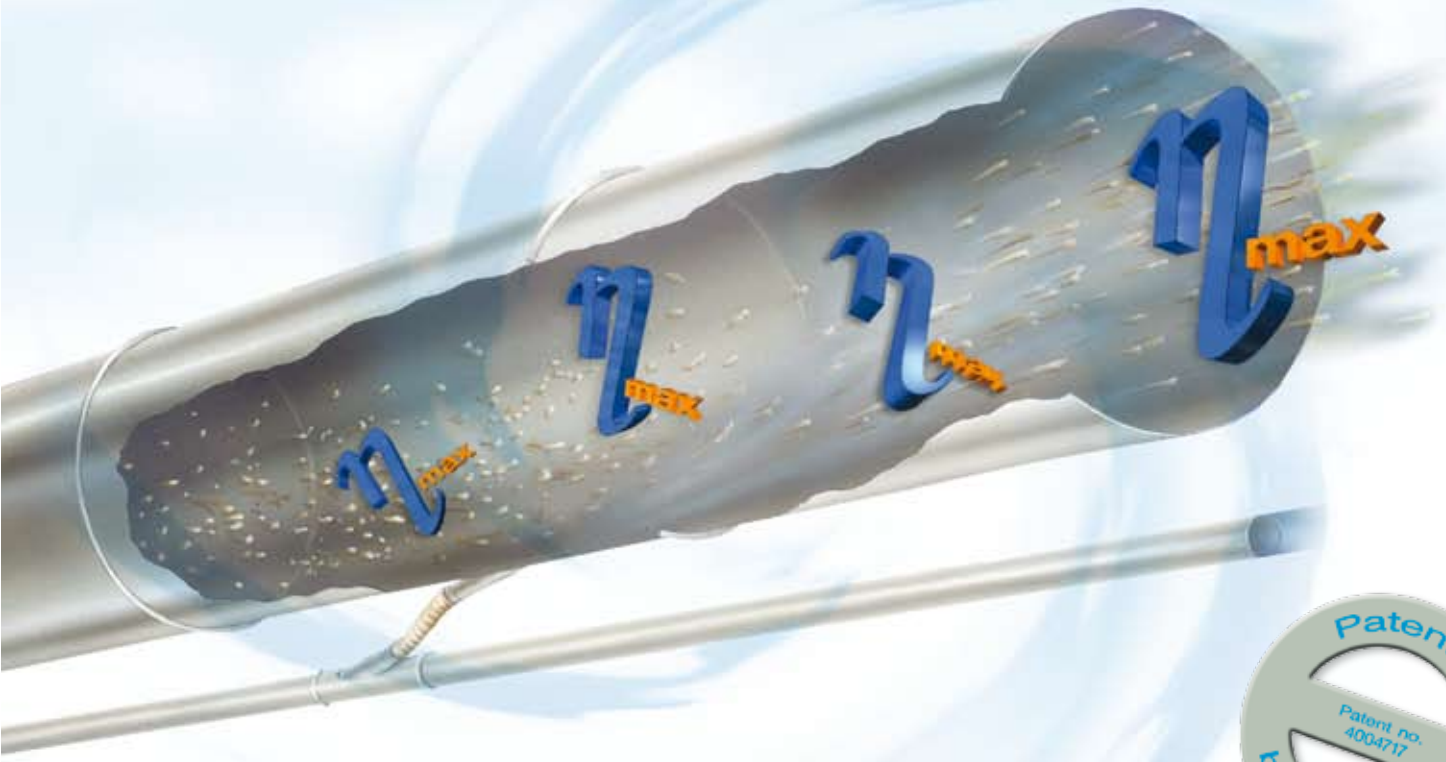
SEPAS PLUS



Patented by Scheuch
Patent no. 4004717

The Maximum Efficiency Extraction System

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Maximum Efficiency Lowers Operating and Investment Costs

Compared to multi-pipe systems, the inherent advantages and the latest η_{max} engineering and control measures make SEPAS-Plus the superior extraction system for the furniture industry.

23% **Lower energy costs for the single-pipe system**

with its patented activation system in comparison to multi-pipe systems using under-pressure control systems.

Savings:
€ 1,340.00 *
€ 3,975.00 **

10% **Reduction in fan energy costs through the new η_{max} unit**

with a higher overall efficiency level for the extraction plant.

Savings:
€ 940.00 *
€ 2,688.00 **

90% **Reduction in energy costs through the IMPULS cleaning system**

with the same noise levels when compared to air purged filters.

Savings:
€ 322.00 *
€ 628.00 **

25% **Reduction in building heating costs**

through automatic control and metering of the return airflow as a function of the outside temperature.

Savings:
€ 600.00 *
€ 1,712.00 **

88% **Reduction in energy costs for transporting materials**

from the filter bunker to the silo because of discontinuous operation in comparison to continuous operation.

Savings:
€ 2,000.00 *
€ 1,580.00 **

Overall, this amounts to an annual savings in operating costs of up to € 5,202.00 in a plant dimensioned for 35,000 m³/h and up to € 10,583.00 in a plant dimensioned for 100,000 m³/h.

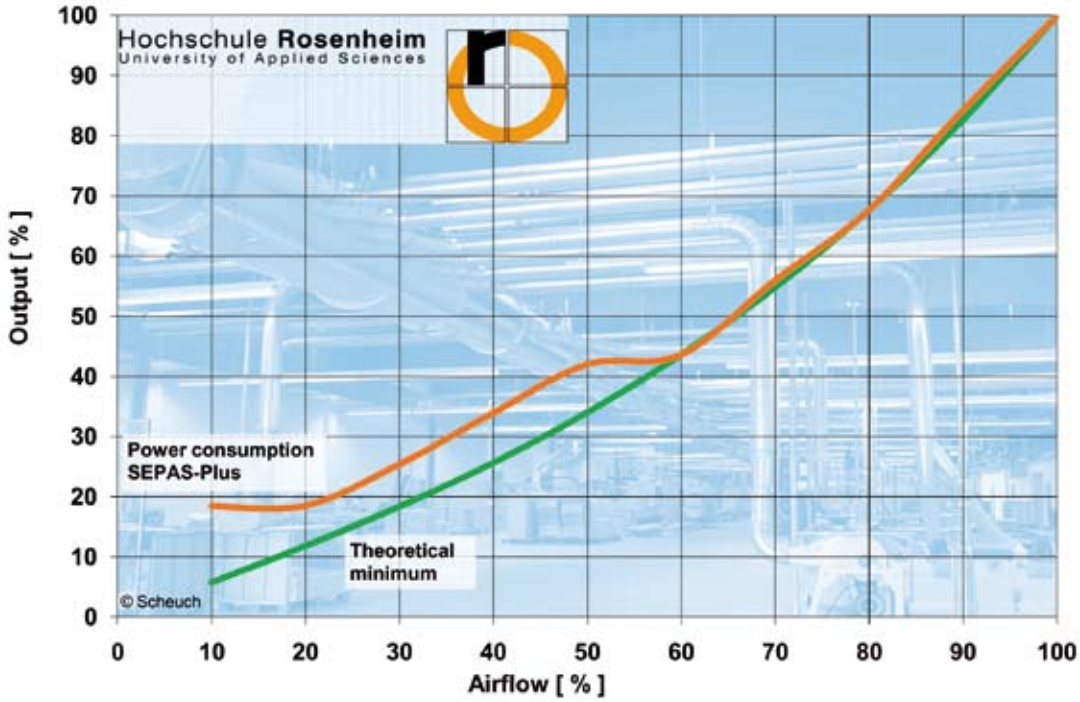
*Extraction plant dimensioned for 35,000 m³/h

**Extraction plant dimensioned for 100,000 m³/h

The Three Decisive System Benefits

Lower Energy Consumption Confirmed

The system SEPAS-Plus excels first and foremost with respect to its high level of energy efficiency resulting from variation of the air volume when operating conditions fluctuate. The extraction performance continuously adapts to the actual load on the processing machinery, which optimizes and keeps energy consumption low. Testing and calculations performed by the FH Rosenheim, School for Wood Technology, confirm that the system SEPAS-Plus operates close to the theoretical "energy minimum".



Impressive Flexibility

The most outstanding benefit for the operator is the extreme flexibility of the single-pipe system with its individually connected machines. When modifying or expanding the machinery park, only the short pipe that connects the production machine to the main extraction pipe must be modified or re-installed and there is no need to re-dimension the main line. The easy and quick adaptation of the extraction system makes increasing the productivity of your plant unproblematic.

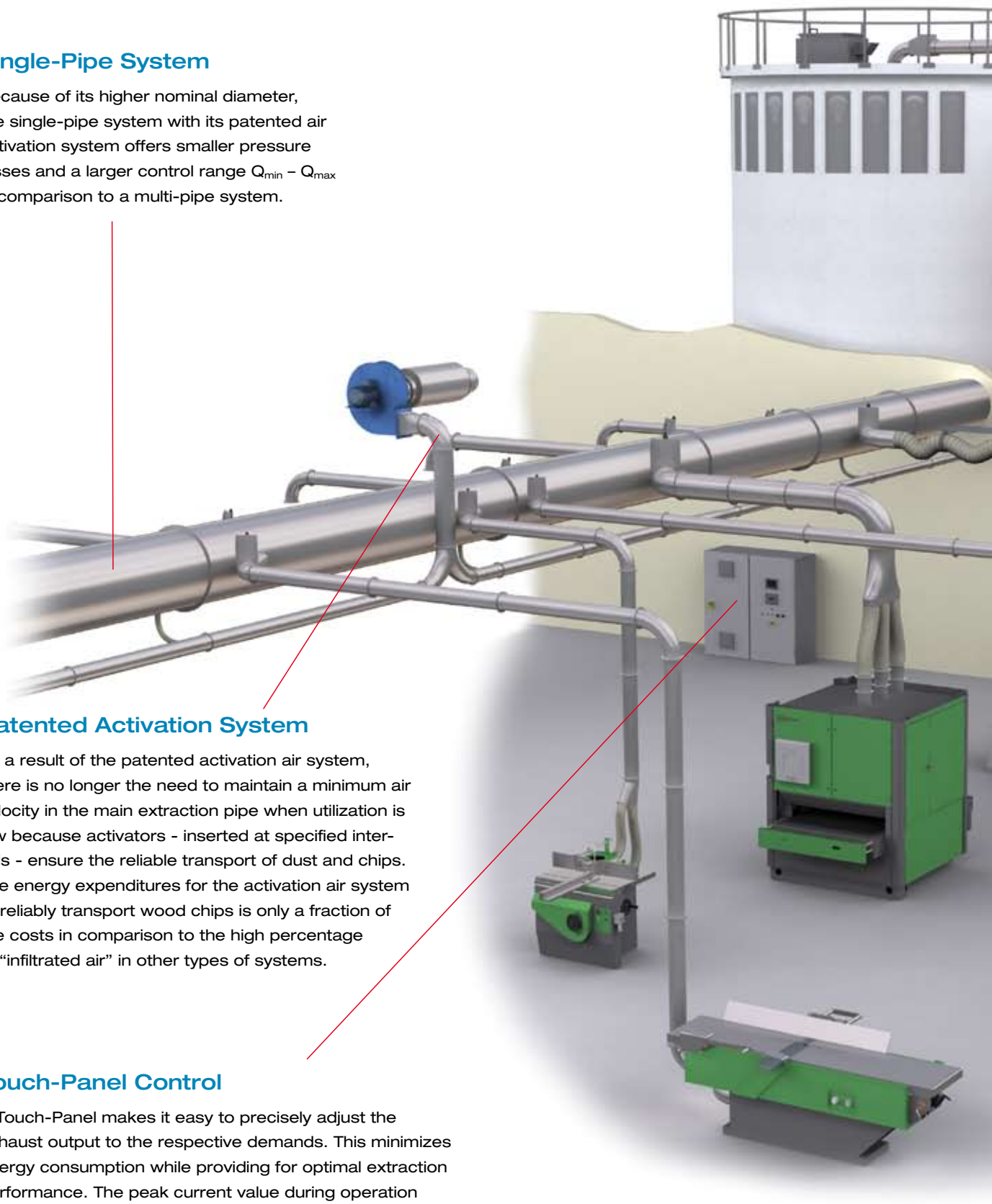
High Extraction Capacity Assured

The single-pipe system assures that the specified extraction effect is uniformly good for every machine and that the total air handling capacity remains constant, independent of the load on the machinery park or the distance of individual machines from the filter. This makes it possible to optimize machine settings for the lowest possible energy consumption and the desired extraction effect.

Variable Adjustment Boosts Energy

Single-Pipe System

Because of its higher nominal diameter, the single-pipe system with its patented air activation system offers smaller pressure losses and a larger control range Q_{min} – Q_{max} in comparison to a multi-pipe system.



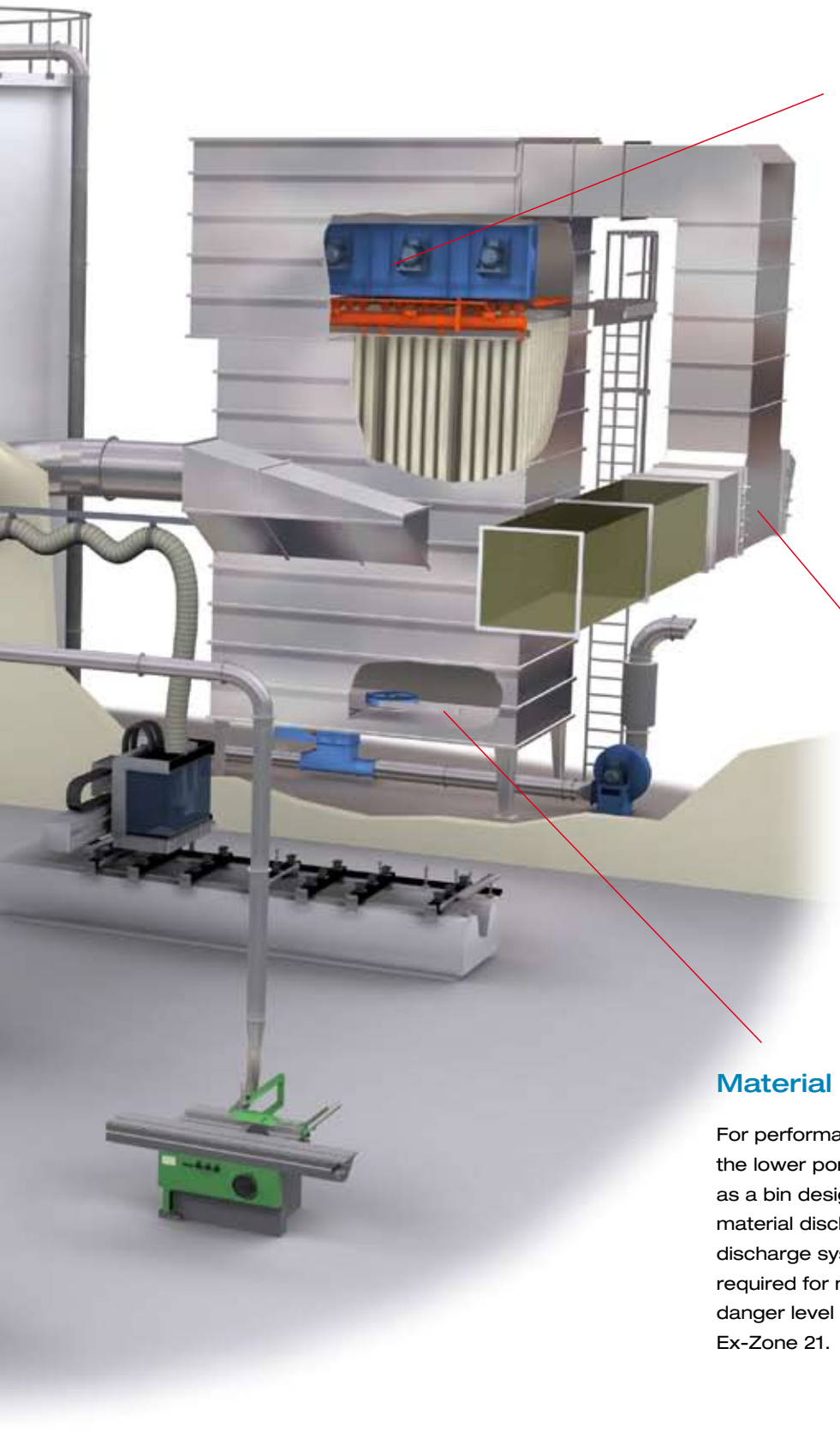
Patented Activation System

As a result of the patented activation air system, there is no longer the need to maintain a minimum air velocity in the main extraction pipe when utilization is low because activators - inserted at specified intervals - ensure the reliable transport of dust and chips. The energy expenditures for the activation air system to reliably transport wood chips is only a fraction of the costs in comparison to the high percentage of “infiltrated air” in other types of systems.

Touch-Panel Control

A Touch-Panel makes it easy to precisely adjust the exhaust output to the respective demands. This minimizes energy consumption while providing for optimal extraction performance. The peak current value during operation can be reduced significantly by automatically reducing the power of the extraction plant.

Savings With Constant Performance



η_{max} Unit

The fans are integrated in this unit, which is located on the side of the filter head, and this results in optimal fan access. Using flow simulations made with CFD calculations, it was possible to optimize the incoming and outgoing airflow and the injector geometry and reduce system resistance. Because this η_{max} unit has been acoustically insulated, the peak noise levels of the cleaning impulses are no longer perceptible.

Return Air

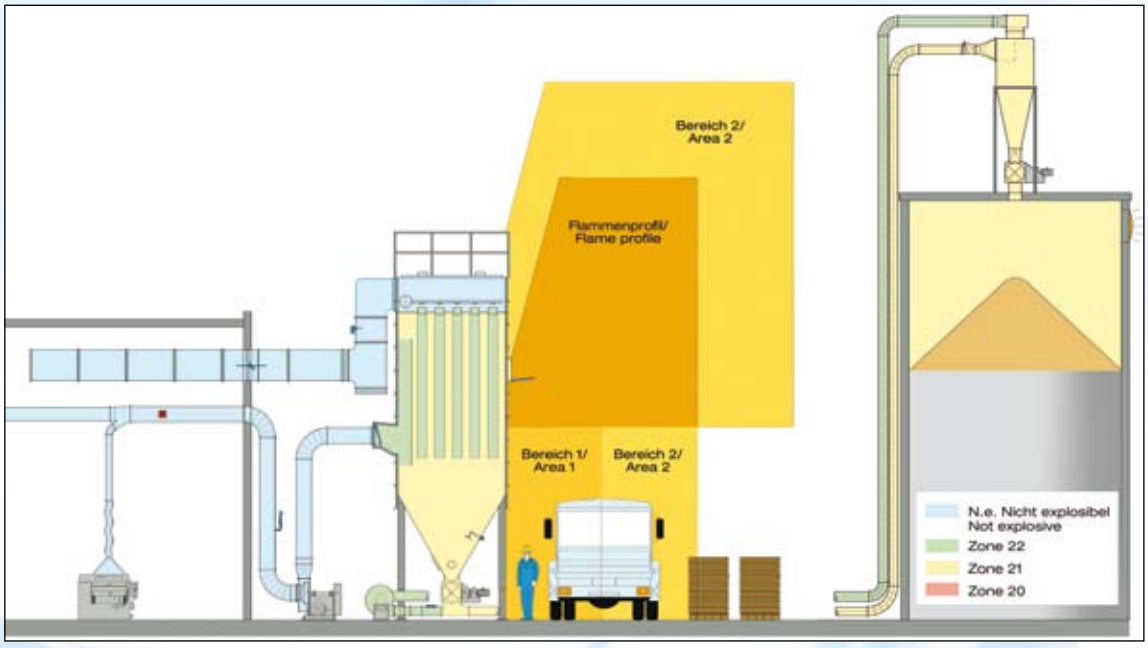
An automatic mixing control unit provides for better utilization of recovered heat by appropriately metering the amount of return air as a function of the outside temperature.

Material Discharge

For performance ranges up to 120,000 m^3/h, the lower portion of the filter can be implemented as a bin design, so that only discontinuous material discharge is required. This type of discharge system significantly shortens the time required for material discharge. As a result, the danger level in the silo can be implemented as Ex-Zone 21.

Perfect and Comprehensive Safety Concept

With respect to fire and explosion protection, Scheuch's entire program of dedusting and material transport systems is ATEX-certified from the point of collection at the production machine to the entry point into the silo. Certification provides legal security for the operator with respect to risk assessment and specification and limitation of safety zones within the framework of the explosion protection document.



Certification of our entire filter program through the H3 Certification Mark confirms that residual dust levels are reliably below 0.1 mg/m³ and that these levels are constantly monitored, so that first-time onsite and subsequent recurring measurements are not necessary. Germany's GS (Geprüfte Sicherheit) safety certification mark confirms that the entire LIGNO-IMPULS filter program meets the highest possible levels of equipment safety with the ensuing level of legal security. ATEX, H3 and GS certification guarantee maximum operating safety and thus maximum operational availability of filter plants.

In addition, Scheuch offers new and tested solutions for transferring material into silos with a reduced potential for danger and a reduced need for pressure venting areas. This eliminates the previous interface problems between silo manufacturers, the manufacturers of extraction plants and the plant operator as the entity responsible for putting a silo into operation.

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