



# **SPÄNEX-paint mist extraction systems**

... the air basis for perfect surfaces!

# Systematic paint mist extraction

## Innovative and economically efficient

For more than 60 years, SPÄNEX extraction and filter systems have been manufactured and sold primarily for wood processing and finishing plants. This also includes systems for extracting paint mist when painting surfaces. The range of products includes compact spraying walls through to underfloor extraction systems and wet spraying walls with potentially required conveyor systems for the painted products including air intake systems.

Profit from our many years of experience in this sector and choose a paint mist extraction system from SPÄNEX.

### Impressive features

#### ■ Suitable system technology

The paint mist extraction system has a significant influence on the achievable quality of the surface. Therefore SPÄNEX places a large amount of value on consulting, planning and developing the optimal system concept in cooperation with the customer.

The entire system is planned based on the local conditions, the parts spectrum, the parts throughput, the painting system in conjunction with the application technology and the required surface quality and taking the provisions of occupational safety and fire and explosion protection into account.

#### ■ Energy efficiency

Large amounts of air are moved in paint mist extraction systems. The energy consumption therefore requires a lot of attention. By using direct drive, high-powered fans with efficiency factors of more than 80%, the power requirement is minimized from the start. In conjunction with the speed control of the supply and extraction fans, the airflow can be adjusted to the respective need so the use-dependent savings potential can be fully exploited.

#### ■ Heat recovery

The extracted air must be reintroduced to the painting chamber as fresh air. Depending on the air quantities, the use of an air intake device with an integrated heat exchanger (cross-current, rotation heat exchanger or circulation system) for heat recovery is economically sensible. Efficiencies of up to 60 % are accessible, resulting in short payback periods and the existing boiler does not have to provide the full heat capacity.

#### ■ Control and regulation technology

The control and regulation technology, which is also developed, planned and manufactured by SPÄNEX in accordance with the motto "everything from one source" also makes a major contribution toward saving on thermal and electrical energy and flexible use of the system.

### Our range of products:

- dry spraying walls
- underfloor extraction systems
- combined systems
- wet spraying walls
- air intake units with and without heat recovery
- control and regulation technology
- construction parts
- extraction tables

### Plus points:

- wide range of products
- complete system solutions
- multi-level separation
  - pre-separation elements with greater storage capacity
  - downstream filter mats with the highest degree of separation
- energy efficiency with need-based extraction capacity
- saving on thermal energy by means of heat recovery

# Spraying walls

## TAW-compact series ■



The compact dry spraying walls are ideally suited for painting smaller parts in the craft and industrial sectors.

The design of the TAW compact series impresses with a two-stage separation. Two filter stages in conjunction with a rectifier ensure even coverage and a very high level of separation. The folding carton filter (pre-separator) stands out with its particularly high paint storage capacity with low pressure loss.

The solvent fumes are extracted via inserted filter cartridges in the base plate.

The TAW compact is produced serially and delivered as a ready-to-connect unit, with one or two integrated fans and exhaust air vents, depending on the capacity. The motors are connected via 10 meter connection cables with a switch/plug combination.

Another advantage of this series is the particularly favorable price-to-performance ratio.

## TAW series ■



The spraying walls are manufactured as a modular system, as self-bearing structures made of galvanized steel sheeting. Adjusted to the range of parts, coverage surfaces with dimensions of 2 x 2m to 5 x 3m can be achieved, whereby the walls can also be set up in combinations.

In addition, to enlarge the coverage surface, the wall body can be equipped with additional funnel-shaped baffle plates.

Furthermore, the dry extraction walls can be delivered with wall extraction vats for collecting the generated paint mist.

Using the corresponding air quantities in conjunction with the air intake and the two-stage separation, the best working conditions can be achieved in the painting room.

Spraying walls from the TAW series are often used in conjunction with conveyor systems for the painted products.

# Underfloor extraction

## SUA series ■



The underfloor extraction system creates optimum workplace conditions for the painter.

The supply air is taken in over a large area via a filter blow-out cover and the exhaust air is extracted via a trough covered with grates. Due to the air flow moving from top to bottom, the falling paint mist is collected and extracted.

Collection ducts are installed in the extraction trough and are equipped with two filter stages.

The underfloor extraction system is customized, planned and designed for the respective requirements. The range of parts to be painted defines the dimensions of the trough and supply air ceiling and thus the supply and exhaust air capacity.

The workpiece can be painted from all sides so the painter can optimally position him or herself when applying the paint coat.

## SUA and TAW series in combination ■



For certain tasks, the combination of the underfloor extraction system with a spraying wall is the ideal solution. In particular, when the range of parts is very different and, for instance, primarily a directed painting process in conjunction with a conveyor system is required.

The supply and exhaust air and, if necessary, the room temperature can be adjusted via the controls in order to achieve the best air-related conditions with the minimum energy requirement.

Due to the generally greater exhaust and supply air quantities, generally air intake devices with heat exchangers for heat recovery are used.

## Wet spraying walls NSP ■



When using larger quantities of paint, wet spraying walls in conjunction with a water treatment system are an alternative to dry spraying walls with underfloor extraction.

The paint particles generated as overspray are partially absorbed by the water film or collected by the air flow and washed out in the extraction slit. In addition, a washing system is installed in the body so, overall, a higher degree of separation is achieved.

The paint particles bound in the circulating water are continuously removed in the water treatment system so relatively long lifetimes for the circulating water are achieved. This saves on disposal costs.

The wet spraying walls are generally made of galvanized steel sheeting or stainless steel in working widths of up to 4m and working heights of 3m. All base types can be combined with each other.

## SAT extraction tables ■



For the grinding work (pretreatment, intermediate paint polishing) required during the painting process, there are extraction tables with different dimensions with which optimum dust collection, with relatively low air quantities, is possible.

The extraction tables are tested by the wood trade association (BGHM) and have received the trade association test mark (BG-Prüfzeichen).

## ZLG air intake units ■



The air intake system replaces the extracted air quantity. The stable box devices include powerful fans and air/water heat exchangers with an upstream filter for cleaning the external air and, in general, heat exchangers for heat recovery.

The supply air is taken into the painting room via special filter blow-out ceilings without a draft.

# Complete system solutions from A to Z

## Perfect in every detail

### ■ Control and regulation technology

The switchgear systems are designed as programmable logical controllers (PLC) in accordance with the newest state-of-the-art. The entire circuitry with the controls are developed and manufactured by SPÄNEX

### ■ High level of production depth

The components of the systems are manufactured on the most modern machines. Due to the depth of manufacturing, our own high quality demands and those of our customers can be securely maintained.

### ■ Fans

The directly powered fans with high-performance impellers and motors with an IE3 efficiency class rating in conjunction with the speed control contribute to energy-efficient operation.



control



exhaust air with deflector hoods



high-performance fans



supply air ceiling with lighting

## Consultation and service

It's a long path from the planning to the finished system. In all phases, SPÄNEX is at your side with the competence and experience from the realization of several thousand projects. The systems are installed by SPÄNEX installation technicians and commissioned by our customer service technicians. Our service, upon request, in conjunction with maintenance agreements, ensures the long service life and reliable operation of the systems.



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