

STROHMATIC

AUTOMATIC LITTERING SYSTEM



For species-appropriate animal husbandry and higher animal welfare!

SCHAUER[®]

PERFECT FARMING SYSTEMS



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STROHMATIC LITTERING SYSTEM

The use of straw in the barn promotes health, animal welfare and species-appropriate behaviour! You are looking for a reliable concept? Schauer Strohmatic is tried and tested as well as efficient!

Animal-friendly husbandry, clean air & better performance!

Reduce straw costs by up to 50 % with Strohmatic. The littering work is fully automatic and thus significantly reduces the workload in the barn.

Well proven for over 20 years with robust components and a sensor-controlled flow of material for optimum functionality.

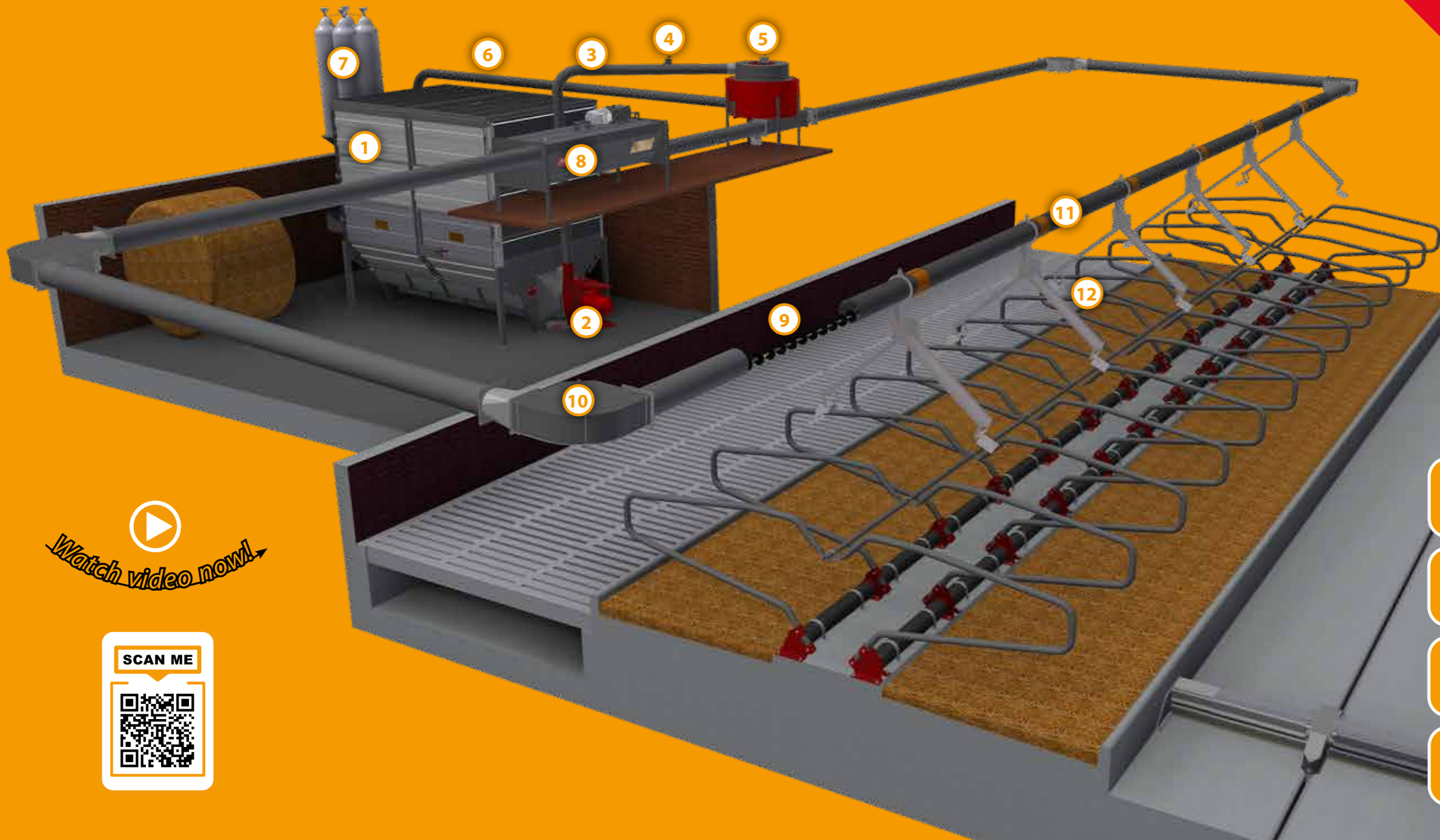
INNOVATION, EXPERIENCE & COMPETENCE FOR YOUR LITTERING SYSTEM!

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SCHAUER
PERFECT FARMING SYSTEMS

STROHMATIC CLASSIC



Watch video now!



- FULLY AUTOMATED LITTERING
- VIRTUALLY DUST-FREE
- SAVES STRAW AND LABOUR
- FLEXIBLE AND LIGHT DISTRIBUTION CIRCUIT

STROHMATIC CLASSIC: AUTOMATIC LITTERING SYSTEM

- 1** Bale breaker for large square or round bales
- 2** Straw mill
- 3** Blow pipe
- 4** Spark detection
- 5** Transfer unit with fill level control
- 6** Suction pipe

STROHMATIC CLASSIC: THE PERFECT SOLUTION FOR YOUR CATTLE BARN

- 7** Extraction Unit
- 8** Actuation Unit
- 9** Conveying line with conveyor chain
- 10** Deflection corner
- 11** Sleeve for opening and closing the dropping opening
- 12** Straw distributor



STORAGE FOR SEVERAL DAYS POSSIBLE

STROHMATIC CLASSIC COMPONENTS



Bale breaker with straw storage

Distribution circuit with deflection corners



STROHMATIC CLASSIC DESCRIPTION



DUST REDUCED UP TO 80 %

Distribution circuit with straw distributor

Simple filling

FOR DISSOLVING AND CRUSHING STRAW IN REQUIRED QUANTITIES

Transfer unit distribution circuit:

- The chopped straw is blown from the straw mill to the transfer unit through the blowing pipe. The integrated fill level monitor ensures automatic regulation of straw quantity.
- Straw and dust are separated in this transfer unit.** The excess air generated by the mill is extracted together with the dust by the suction unit through a sieve plate.
- The dedusted straw, on the other hand, drops into the distribution circuit.

Actuation Unit:

- This is where the conveyor chain is driven. The built-in tensile device ensures permanent tensioning of the conveyor chain. At the same time, it serves as overload protection.

Distribution circuit:

- The distribution circuit is very flexible in its design and consists of a delivery pipe with a conveyor chain as well as various deflection corners (90°, 180°, adjustable corners) in order to optimally supply all areas in the barn with straw. The maximum possible length is 270 metres per bedding circle.

Straw dropping point:

- For punctual permanent dropping points, the desired amount of litter is set with up to 90 opening sleeves. For dropping points where straw is only partially required, rotating sleeves can be used for quick opening and closing. Straw distributors can be used for lying pens facing each other or where a large area of distributed straw is required, e.g. for tread muck systems or deep litter barns. For larger barns in particular, the straw can be distributed over up to 4 distribution positions per discharge point in the delivery pipe. This considerably increases the capacity and efficiency of the Strohmatic system.

Transfer unit and drive unit



Straw distributor



AUTOMATIC STRAW DISTRIBUTION THROUGHOUT THE BARN FOR ALL ANIMALS

Functionality:

The bale breaker can be filled with round or square bales. Inside the bale breaker, the **straw bale is broken up automatically** and the straw is transported to the straw mill. **The straw mill chops the straw** to a straw length of 2 cm to 4 cm, depending on the size of the sieve. **Due to the absorptive capacity of the chopped straw, up to 50 % less straw is required.**

At the same time, the resulting air flow is used to blow the straw to the transfer unit.

The dust is removed from the straw in this transfer unit.

The excess air created by the straw mill is extracted together with the dust and the dedusted straw falls down into the distribution circuit.

The dust is sucked up for extraction and collected in a dust container, the excess air escapes, cleaned via filters, into the area.

This achieves a dust reduction of up to 80 %.

The dedusted straw is transported by a conveyor chain, which is pulled by the actuation unit, through the conveyor pipe to the discharge openings.

At each of these discharge openings, a portion of the straw falls either directly or via straw distributors onto the area to be spread.

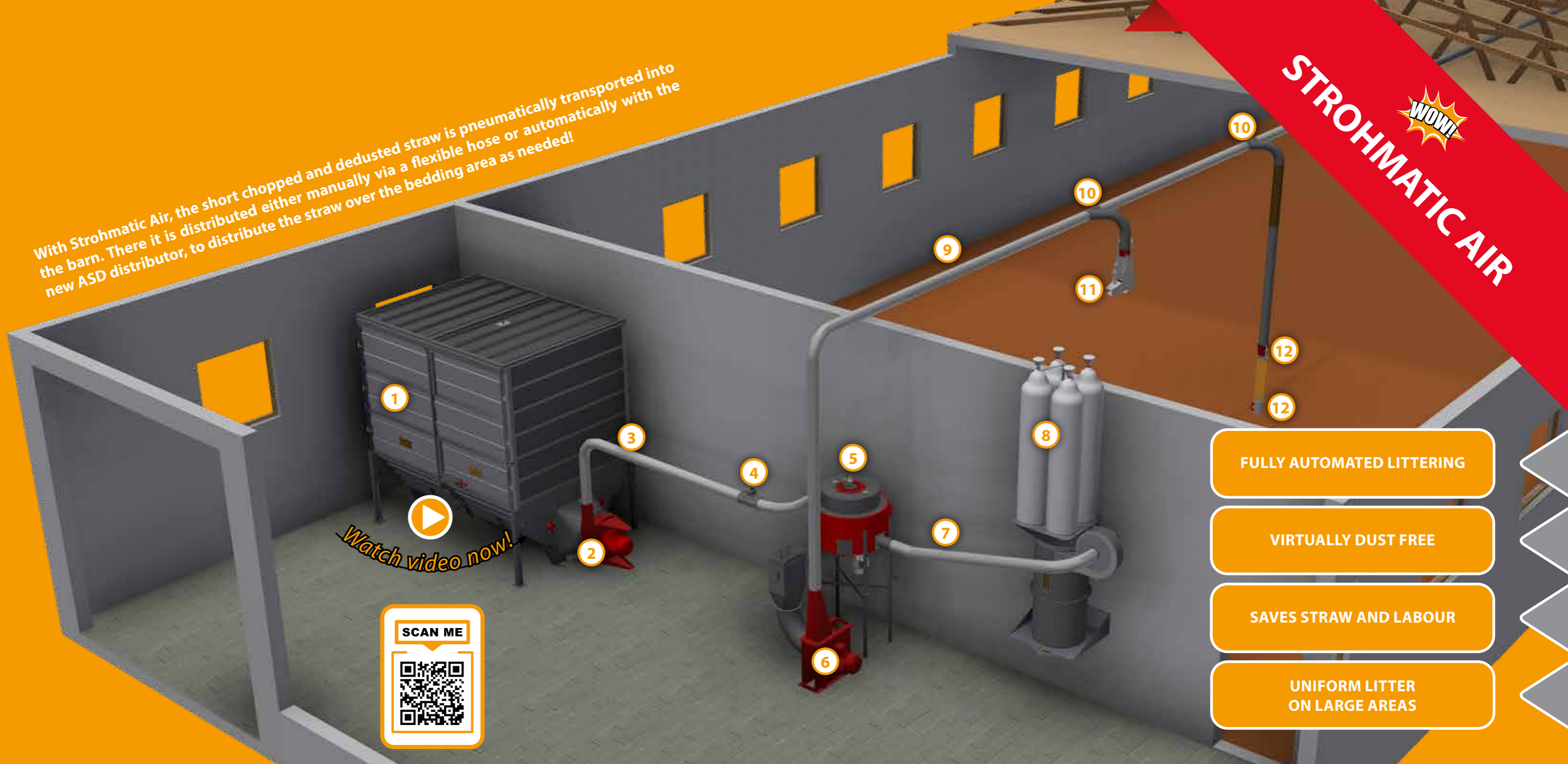
Excellent muck quality:

- Very dry, like compost
- Easy to transport
- Mainly aerobic processes
- Fast decomposition



With Strohmatic Air, the short chopped and dedusted straw is pneumatically transported into the barn. There it is distributed either manually via a flexible hose or automatically with the new ASD distributor, to distribute the straw over the bedding area as needed!

WOW!
STROHMATIC AIR



- FULLY AUTOMATED LITTERING
- VIRTUALLY DUST FREE
- SAVES STRAW AND LABOUR
- UNIFORM LITTER ON LARGE AREAS

STROHMATIC AIR: AUTOMATED LITTERING SYSTEM

- | | |
|---|--|
| 1 Bale breaker for large square or round bales | 4 Spark detection |
| 2 Straw mill | 5 Transfer unit with fill level control |
| 3 Blow pipe | 6 Suction pipe |

STROHMATIC AIR: THE PERFECT SOLUTION FOR YOUR POULTRY BARN

- | | |
|----------------------------|---|
| 7 Extraction pipe | 10 Diverter (electric or manual) |
| 8 Extraction | 11 Automatic straw distributor |
| 9 Blow line in barn | 12 Coupling with littering hose |



LITTERING OF LYING AREAS

STROHMATIC AIR COMPONENTS



Manual littering with litter hose

Transfer unit with suction pipe and diverter



STROHMATIC AIR DESCRIPTION



Strohmatic Air ASD

Bale breaker & transfer unit with suction pipe

LITTERING SYSTEM FOR POULTRY-, CATTLE- OR PIG BARN

Main fan & auxiliary fan:

- **Dedusted straw** is transported by a screw from the transfer unit into the main fan.
- The straw is blown into the barn by the main blower and, in the case of **longer pipes**, also by additional blowers.

Manual littering with bedding hose:

- The straw in the blowing pipes is blown to the desired distribution point by **automatically or manually adjusting the pipe deflectors**.
- A litter hose can now be coupled to this and the straw distributed in a targeted manner.

Automatic littering with Strohmatic Air ASD distributor:

- Straw is blown to the desired distribution point by **automatic tube diverters**.
- There, the straw is distributed evenly over a wide area for an adjustable amount of time by the Strohmatic Air ASD distributor.
- Each distributor has an individually adjustable spreading duration (quantity) and spreading angle.
- This way, area by area and barn by barn are littered fully automatically.



Before

After

STROHMATIC AIR ASD - LITTER (LYING) SURFACES AUTOMATICALLY

Strohmatic Air ASD inspires!

Our customers are already enthusiastic about the semi-automatic Strohmatic Air bedding system: The bale breaker automatically breaks up round or square bales and the loose straw is chopped rapidly. Before being transferred to the pneumatic „Air“ distribution system, the chopped straw is particularly well dedusted (80 % dust reduction). This also reduces dust emissions. Until now, the chopped straw was distributed manually in the barn through a flexible hose.

The new, automatic and rotating straw distributor **ASD – Automatic**

Straw Distribution (patent pending)

is an intelligent and particularly labour-efficient new development that allows the entire bedding process to run fully automatically. The maximum distribution radius extends to 8 m per distributor, the maximum delivery rate up to 700 kg/hour. The Strohmatic Air ASD is controlled by a new, improved and online accessible control unit and distributes the desired amounts of straw at defined times. This eliminates the need for manual distribution. Duck, turkey or other straw barns (cattle, pigs, sheep, goats,...) can be automatically littered with small quantities several times a day, saving straw and reducing dust.

In the cattle sector, for deep stalls or pedal manure stalls as well as for large pen stalls for pigs, this clean and safe method is an enormous help.

ASD with automatic straw distribution significantly promotes animal welfare, reduces any hazards from entering the pens in the animal area and reduces energy and labour input to a minimum.

Strohmatic Air ASD with automatic straw distribution is revolutionary!



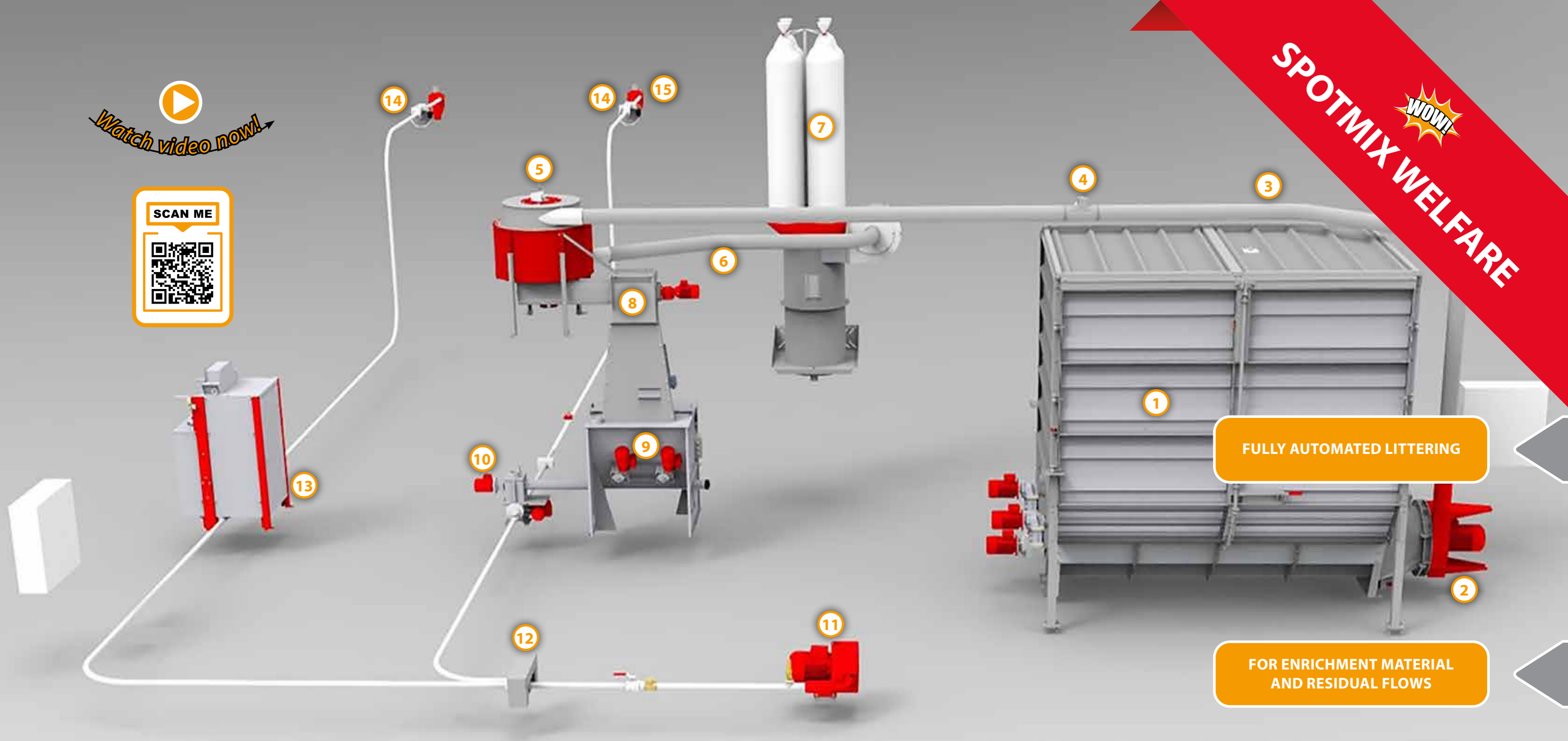
INNOVATION AWARD
EuroTier
SILVER MEDAL

NEU

Watch video now!



WOW!
SPOTMIX WELFARE



FULLY AUTOMATED LITTERING

FOR ENRICHMENT MATERIAL AND RESIDUAL FLOWS

SPOTMIX WELFARE: AUTOMATED LITTERING SYSTEM

SPOTMIX WELFARE: DOSING SYSTEM FOR ENRICHMENT MATERIAL

- 1 Bale breaker for large square and round bales
- 2 Straw mill
- 3 Blow pipe

- 4 Spark detection
- 5 Transfer unit with fill level monitoring
- 6 Extraction pipe

- 7 Extraction
- 8 Discharge screw
- 9 Dosing container

- 10 Feeding pipe
- 11 Side channel blower
- 12 Pipe diverter

- 13 Portion mixer
- 14 Rotary distributor
- 15 Straw chute

SPOTMIX WELFARE COMPONENTS



Strohmatic bale breaker



Dispensing Vat



Area distributor



Dispensing Vat

FOR SATISFIED AND HEALTHY ANIMALS

DOSING SYSTEM FOR STRAW BEDDING FOR ANIMAL WELFARE

Welfare System:

- The system is controlled via the Spotmix feeding computer and thus offers the flexibility which Spotmix is known for.
- For the littering material, an extra pipe as well as the feed pipe can be used.
- Welfare offers the possibility to distribute bedding material depending on the feeding system.
- The dosing system can be adapted to different types of straw and their properties via the control system or frequency converter.

Welfare Dispensing Vat:

- Pre-storage and dosing tank with agitator and empty indicator.
- Feeding with rotary valve
- The dispensing vat is filled manually with short or chopped & dedusted material.
- The Strohmatic basic system can be used for automatic straw preparation and filling of the dispensing vat.

Distribution:

- The air flow required for transport is generated by the side channel blower.
- The loosened litter material is fed via a special spiral to the sluice, where it is evenly distributed into the conveying air flow.

- The discharge point is selected via pipe diverters and rotary distributors.
- At the discharge point, the conveying air is separated from the material via a cyclone or an optimised distributor.

Dropping Point Distribution and Dosing:

- Fixed Schedule
- Determined by litter curve
- Depending on daily schedule
- Depending on weekly schedule
- Depending on the animal population of one or more feed valves

FEEDING OF ENRICHMENT MATERIAL AND FOOD RESIDUES

Spotmix Welfare

The EU Pig Farming Regulation requires pig farmers to provide the animals with occupational material for rooting and playing.

Spotmix Welfare, a functional extension of the proven Spotmix Multiphase feeding system, now allows automatically chopped straw, sawdust or pelletised bedding and rooting material to be distributed to the lying areas in the pens in required quantities.

Of course, the system can also be used only for „littering“ and the supply of enrichment material.

The enrichment material (with a maximum fibre length of 4 cm) is dosed into the Spotmix feed pipe from a special dosing unit with a spiral screw conveyor as a „bypass“ and transported

to any areas in the barn where the material is to be offered.

The dosage is time-controlled with pneumatic distribution.

At each dropping point, the conveying air is separated from the enrichment material by a cyclone, so that the material reaches the desired point without any significant dust formation.

The maximum conveyor capacity is, for example, 60 kg per hour for chopped straw. For sawdust approx. 100 kg per hour. The maximum conveying length is 200 metres.

The system reduces the workload only to the supply of the dispensing vat. This can also be filled automatically via a bale breaker with connected straw mill and dust extraction.

Close ecological circular flows through reuse of dry food residues:

In addition, the system components can also be used to transport and distribute various dry residual streams or food waste from industry and trade to the barn.

This option offers many economic and especially environmental advantages

Examples of residual flows from the food industry:

Bread by-products and bread residues, bakery products, potato production, crisps, chips, popcorn etc.

Maximum flexibility for enrichment material and littering!

Spotmix control Unit



Dual distribution



The animals enjoying the straw



Spotmix Welfare in the high welfare barn





Bale breaker with straw storage



Bale breaker with loading platform



Bale breaker and extraction



Spark detection

STROHMATIC BALE BREAKER, STRAW MILL & PRE-STORAGE SYSTEM

Bale breaker:

- The bale breaker is loaded with round or square bales with a maximum straw length of 35 cm and a maximum moisture content of 14 %. The straw bale is loosened by turning the paddle rollers back and forth and the loose straw falls down to an auger, which transports the straw to the straw mill. Approximately 300 to 500 kg of compressed straw are broken up per hour.
- For filling from above, the bale opener can be designed with a fold-up lid. For maximum operating comfort, a bale opener with optional loading platform can be used.

Straw mill:

- Upon arrival at the straw mill, the long straw is chopped through various sieve sizes to the desired straw length, between 18 and 40 mm, and blown to the transfer unit. Due to the increased absorbency of the chopped straw, a straw saving of up to 50 % compared to long straw is possible.

Straw pre-storage:

- For larger quantities of straw or to avoid having to reload straw for a longer period of time, an automatic straw pre-storage system consisting of 2, 4 or 6 modules with up to 500 kg of straw per module can be attached to the bale breaker.
- Depending on the design, it is possible to store up to 3 tonnes of straw and automatically feed it to the bale opener.



STROHMATIC SPARK DETECTION, TRANSFER & EXTRACTION

Spark detection:

- Spark detection forms an important part of the safety concept of every Strohmatic system. Sparks that may be caused by foreign bodies in the straw mill are detected and the system is switched off immediately. Other safety components include sprinklers in the bale breaker, enclosed construction of all components, temperature sensors in the straw mill and more.

Transfer unit with chute:

- The optional use of a transfer unit with auger discharge is a perfect complement to bedding. This can be used to mix with feed or to store chopped dust-free straw in a pile.
- Dust is removed in the same way as when using a transfer unit for circular systems, except that the straw is discharged to a single point via an auger. A great advantage is the possibility of combining different transfer units (bedding, feeding, pre-storage) with only one Strohmatic system.

Extraction unit:

- The dust and excess air is extracted from the transfer unit by suction. This makes it possible to reduce the dust load in the stable by up to 80 % compared to bedding with non-dusted long straw! This has a beneficial effect on the health of humans and animals and above all on the reduction of odour, as the dust particles are also responsible for carrying odour. The extractor is available in different sizes and optionally with an automatic dust discharge.



STROHMATIC LIGHT

WOW!



FULLY AUTOMATED LITTERING

ALMOST DUST-FREE

FOR MULCHED STRAW

FOR SHORT CHOPPED STRAW

STROHMATIC LIGHT: AUTOMATIC LITTERING SYSTEM

- 1 Bale breaker light
- 2 Transfer to conveyor line
- 3 Actuation unit
- 4 Strainer cleaning system
- 5 Suction points
- 6 Extraction pipe

STROHMATIC LIGHT: THE PERFECT SOLUTION FOR YOUR PIG BARN

- 7 Extraction Unit
- 8 Conveying line
- 9 Deflection corner
- 10 Transfer unit
- 11 Hinged dispenser unit
- 12 Pipe dispenser
- 13 Drain pipe
- 14 Residual discharge



Bale breaker light

Screen tube cleaning



Distribution circuit with hinged dispenser unit

Simple filling

STROHMATIC LIGHT FOR MULCHED OR SHORT CUT STRAW

Bale breaker Light:

- The bale breaker Light can be loaded with round or square bales with a maximum straw length of 8 cm and a maximum moisture content of 14 %. The straw is loosened from the bale by the scraper bar and conveyed to the front for transfer. Approx. 150 to 250 kg of pressed straw are broken up per hour.

Transfer Unit:

- The loosened straw drops in the transfer unit and is sucked into the conveyor chain, where it is dedusted at the same time.

Actuation Unit:

- This is where the conveyor chain is driven. The built-in tensioning device ensures permanent tensioning of the conveyor chain and overload protection.

Screen tube cleaning system:

- Straw and dust are separated. The air-dust mixture is extracted through the suction pipe for dust removal. The straw is transported further in the distribution circuit.

Distribution Circuit:

- The distribution circuit is very flexible in its design and consists of a pipe chain conveyor with a diameter of 80 or 127 mm, as well as various deflection corners (45°, 90°) to optimally supply all areas in the stable building with straw. A maximum length of up to 350 m is possible per bedding circle, depending on the number of deflection corners and straw feeders.

Hinged dispenser unit:

- The stainless steel hinged dispenser has a volume of 15 litres. Due to the low installation height, it is particularly suitable for low barns. The dispensers are emptied by means of a cable pull or automatically by compressed air.

Pipe dispenser:

- The pipe dispensers can be filled with different amounts of straw, depending on the length of the pipe. By slightly inclining the pipes, e.g. in the case of opposing stalls, a central pipe in the middle is sufficient.

Drain pipe:

- A pipe which is fixed just below the distribution circuit is led to just above the floor, e.g. between opposing stalls. The pipes are filled completely and straw can be removed manually from the bottom.

Residual discharge:

- At the end of each circuit, excess straw must be transferred - either with a transfer unit into the distribution circuit or with a residual discharge unit back into the bale breaker. The distribution circuit then also empties straw from the transfer units into the bale breaker.

Closing ecological cycles by recycling dry food residues:

In addition, the plant components can also be used to transport and distribute various dry residual streams or food waste from industry and commerce to the barn.

This option offers many economic and, above all, ecological advantages.

MINIMUM LABOUR INPUT AND MAXIMUM TIME SAVINGS

Product description Strohmatic Light:

The bale breaker is fed with short straw, in the form of round or square bales, with a maximum fibre length of 8 cm. The loosened straw falls through the transfer unit into the chain. From the transfer unit, the straw is transported through the sieve tube cleaning unit. There, the straw is dedusted

The dust is sucked from both extraction points through the extraction pipe to the extraction unit and collected in a dust container, the excess air escapes, cleaned via filters, into the surrounding area. The dedusted straw is transported by a conveyor chain, which is pulled by the actuation unit, through the conveyor line to the discharge openings. There, different types of dispensing units are filled one by one.

At the end of the bedding circuit, a sensor checks the amount of straw and switches off the system after filling. Until the sensor switches off, the returning straw is emptied into the bale breaker by a residual emptying system. In larger or multiple barns, the straw can be transferred from one circuit to the next by using transfer units.



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