

Herding® and the Starch Industry

pure productivity

Complete Dust Filtration Technology for the Production of Starch



Complete Dust Collection Systems - Filtermedia - Service



pure
productivity

Herding
FILTERTECHNIK

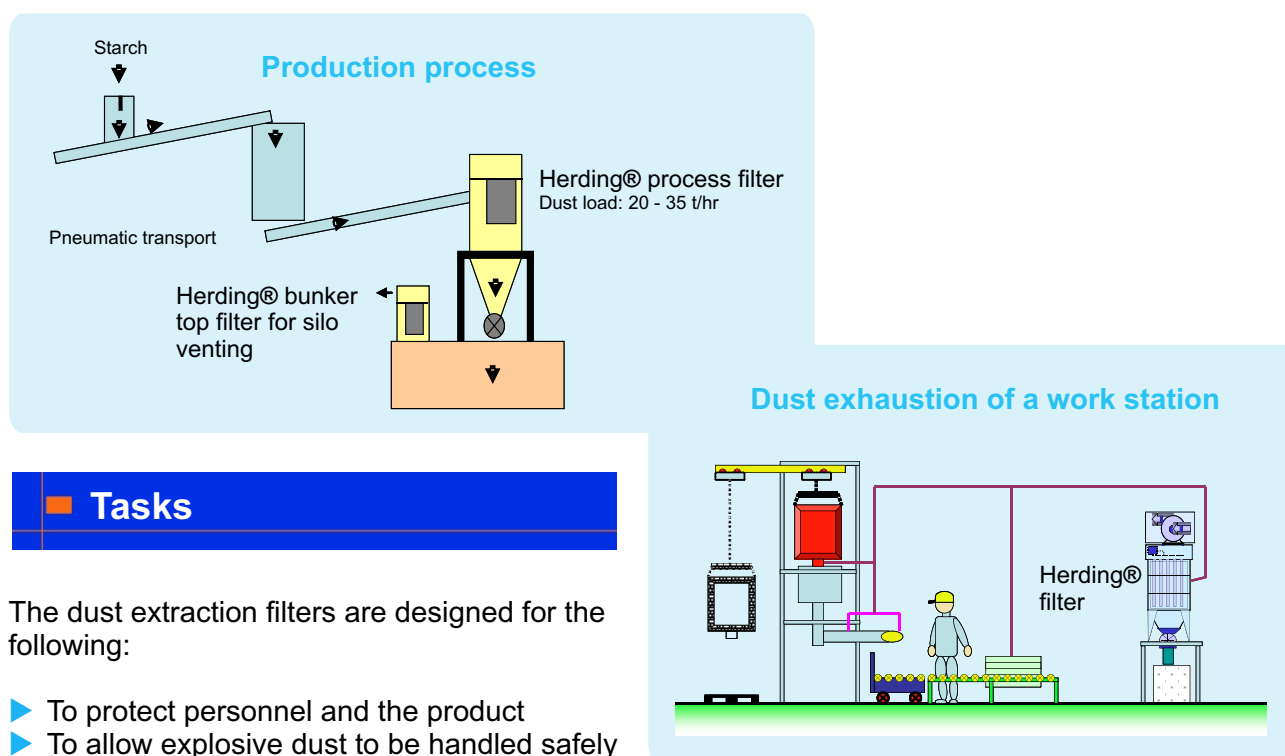
■ The filter range for the food industry

Due to many years of experience and practical knowledge HERDING has gained in the starch industry, Herding GmbH Filtertechnik is a competent partner concerning complete system solutions in dust filtration.

Whether they are process filters in production processes or silo top filters, Herding® filter units have proven themselves as ideal for dust extraction and material recovery tasks in the starch industry. They are used in a variety of different processes:

Purifying the raw products – pre-grinding – separating – final grinding – screening – drying – pneumatic transport - product storage - packing

The examples below show a process chart with a Herding® process filter for pneumatic transport with a Herding® bunker top filter for silo venting or a dust exhaustion of a packaging line.



■ Tasks

The dust extraction filters are designed for the following:

- ▶ To protect personnel and the product
- ▶ To allow explosive dust to be handled safely
- ▶ To minimize maintenance and spare parts costs

Herding GmbH Filtertechnik designs and builds both the filter media and plants to order. Solutions developed specially for the starch industry can be put to immediate use. Herding plants are based on familiarity with the special properties of starch dust and on adaptation of the many benefits of the sinter-plate filter to these properties.

- ▶ The extremely long service life of the filter media minimizes their replacement, which is often expensive and complicated particularly on silos that are difficult to access
- ▶ The coordinated construction of the housing and the filter medium makes “high purity design” possible, e.g. for baby food and pharmaceutical filling agents
- ▶ Knowledge of the material data and the process means that design measures can be taken to avoid tertiary measure (for example by the HSLEx filter unit without tertiary measures) to comply with the ATEX Directive

We are delighted to be able to offer you a complete and rounded range of filters for the production of starch.

Filter elements


The Herding® filter element in its various designs is well known for a long lifetime and reliability and therefore matches perfectly the high standards of the production process. With its sintered rigid body material and the embedded PTFE-coating, the filter has demonstrated the highest separation efficiency and performance results, even with highly abrasive and fine dusts.

Herding® sinter-plate filter

- ▶ Rigid body
- ▶ Very long lifetime
- ▶ High separation efficiency
- ▶ Washable



ATEX

As the sinter-plate filter is approved as Dust  ZoneBarrier the zone sections for the dust explosion control can be as follows:

Clean gas compartment

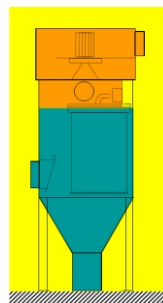
No explosive atmosphere
Dust  Zone Barrier

According prVDI 2263 Sheet 6.1

Raw gas compartment

Explosive atmosphere

- timer-based cleaning **Zone 20**
- differential pressure - based cleaning **Zone 21**



Surrounding

No explosive atmosphere
During maintenance, outdoors installation

Explosive atmosphere
For indoors and outdoors installation according to operator's determination **Zone 22 or 21**

Dust disposal systems

Quite often, the dust can no longer be collected in traditional dust bins. Instead, bag-in/bag-out systems ①, pneumatic transfer into drums ②, or continuous heat sealed plastic tubes ③ are often employed.



①



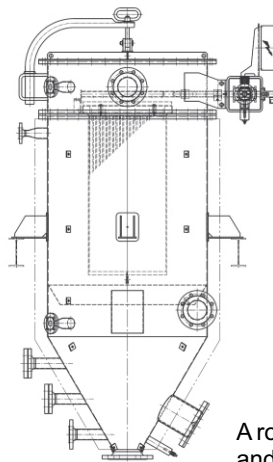
②



③

■ Practical examples

Rectangular process filters with a high dust load are used for pneumatic transport, for example. Smaller filters which are only subjected to a low load are used to vent silos.



- ▶ Filter elements on the clean gas side (DELTA²)
- ▶ Grounded welds
- ▶ No horizontal surface areas
- ▶ Fill level established by microwave technology
- ▶ Pressure differential measurement in the filter housing using diaphragm technology
- ▶ Slotted plate 10 mm thick with no reinforcement
- ▶ No door in the filter housing

A round filter in a hygiene version is used for baby food and pharmaceutical filling agents.

■ Summary

- ▶ Familiarity with the starch production processes
- ▶ Filter units for a wide variety of production processes available
- ▶ Explosive dust can be removed safely
- ▶ HSLEx filter approved by DEKRA EXAM
- ▶ Filter medium also for high dust load
- ▶ Hygienic and insensitive filter medium
- ▶ Low-wear filter medium
- ▶ Hardly any filter replacement, for example at silo dust extraction
- ▶ Certificates for filter media - low emissions = high material recovery
- ▶ Dust disposal systems available on demand
- ▶ Central dust disposal system reduces costs

We provide engineering and deliver custom-made solutions inclusive up-grading of existing filter plants.

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