

pure productivity
durable. effective. filter.

PHARMACEUTICAL PRODUCTION

THE ORIGINAL
BY HERDING


made in germany

BENEFITS

SAFE SEPARATION OF PHARMACEUTICAL DUST EMISSIONS

The dynamic development in the production and processing of highly active and highly potent substances in the pharmaceutical industry increasingly requires a high degree of safe solutions.

Particulate emissions are generated throughout the entire process chain of pharmaceutical solids production. These emissions must be kept free of hazards in the containment, handled without contamination during discharge, and separated almost absolutely in the filtration process. Herding® filter systems meet the highest requirements in terms of contamination-free operation and safe handling.

Even the finest particle fractions are reliably separated on the basis of pure surface filtration. Lowest clean gas values, absolutely constant operating conditions, highest availability and energy efficiency are the key features of the innovative technology.

**DURABLE
LONG SERVICE LIFE**



**OPERATIONAL SAFETY
DUE TO RIGID FILTER MATRIX**

**CONSTANT
OPERATING CONDITIONS**



**SAFE CONTAINMENT
PROVEN UP TO OEB 5**

**ENERGY EFFICIENCY DUE TO
LOW CLEANING PRESSURE**



**SAFE HANDLING
OF STICKY DUST**

**LOWEST CLEAN GAS VALUES
FROM PRIMARY FILTER STAGE ON**



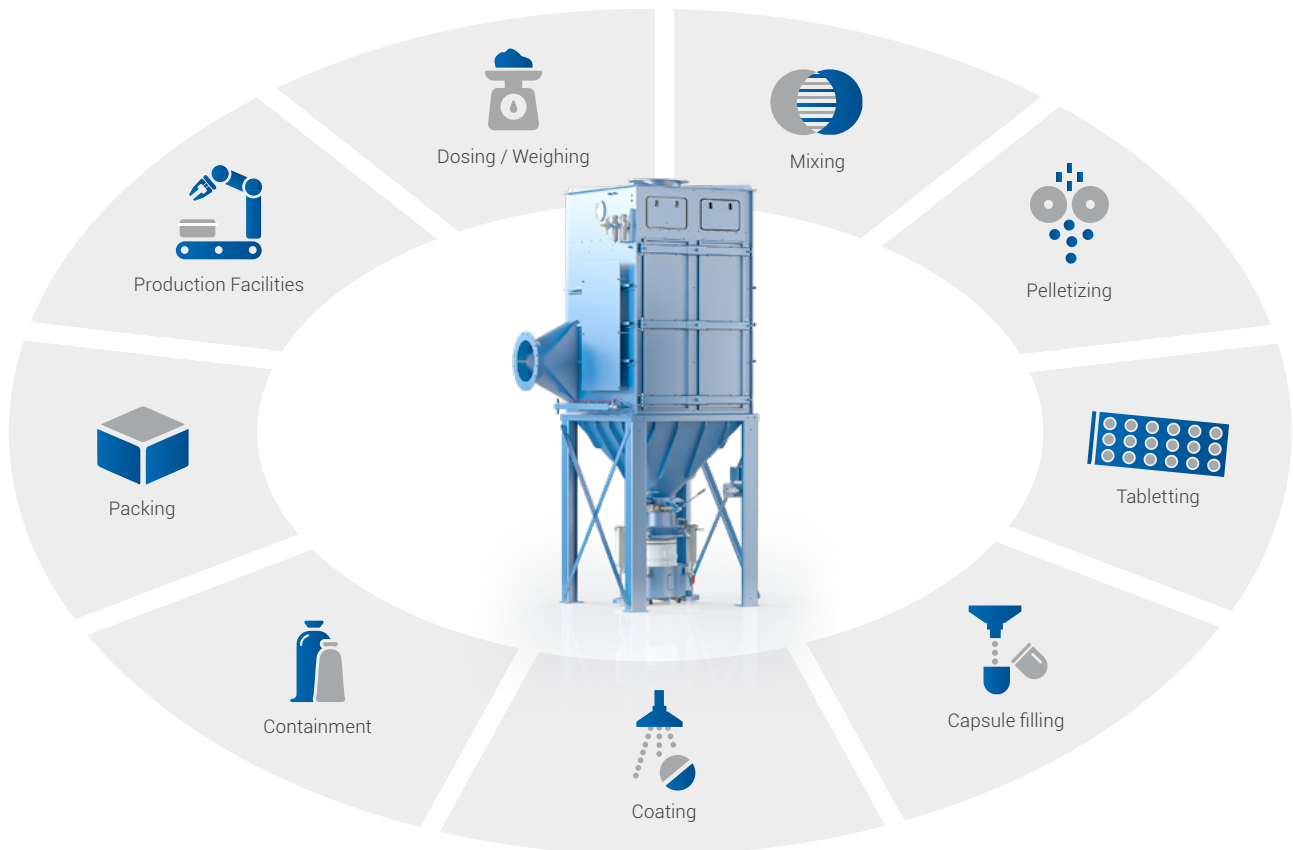
**SUSTAINABLE PROVEN
TECHNOLOGY**



PROCESSES

EFFICIENT FILTRATION FOR ALL AREAS

Reliable and efficient filtration is absolutely essential to make the manufacturing and processing operations of pharmaceutical solids production safe and sustainable. Herding® filter technology enables maximum availability and safe plant operation in almost all processes that generate particulate emissions. Granulation and drying processes, tableting, charging processes, various fluidized bed and coating processes, but also weighing, mixing and screening are examples of the wide range of applications for the use of pure surface filtration with the Herding® Sinter-Plate Filter.



Dosing / Weighing



Mixing



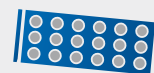
Production Facilities



Pelletizing



Packing



Tableting



Containment



Coating



Capsule filling

HERDING FILTERTECHNIK

From self-developed filter media to completely installed filter systems, the product variety of Herding® covers a complete spectrum.

The distinctive vertical range of manufacture in Germany ensures an extremely high quality standard and the greatest possible flexibility for customers worldwide.

Based on a well-planned modular construction system, a wide range of plant type series can be realized, individually customized to suit the specific application.

- Proven suitability for all currently defined OEB levels
- Sophisticated systems for contamination-free containment
- Extensive expertise in preventive and constructive explosion protection
- Many years of experience in handling adhesive/cohesive dusts

HERDING FLEX

The flexible type series

HERDING RESIST

The round type series for high pressures

HERDING PROCESS

The type series for highest demands

HERDING COMP S

The type series for limited spaces

HERDING PHARMEX

Especially for the pharmaceutical sector



FILTER REPLACEMENT

Primary filter stage: Herding® Sinter-Plate Filter		OEB 1 1-5 mg/m ³	OEB 2 0,1-1 mg/m ³	OEB 3 10-100 µg/m ³	OEB 4 1-10 µg/m ³	OEB 5 < 1 µg/m ³
Remove filter elements	store open on a pallet	✓	✗	✗	✗	✗
	pack in plastic foil	✓	✓	✗	✗	✗
Herding FIRST RINSE	wet, remove and pack in plastic foil	✓	✓	✓	✓	✓
Secondary stage: HEPA Filter cartridge						
Remove filter cartridge	store open on a pallet	✓	✗	✗	✗	✗
	pack in a plastic foil	✓	✓	✗	✗	✗
Bag-In/Bag-Out	close with ratch tape	✓	✓	✓	✓	✗
	close with clip	✓	✓	✓	✓	✓

DUST DISCHARGE

discontinuous		OEB 1 1-5 mg/m ³	OEB 2 0,1-1 mg/m ³	OEB 3 10-100 µg/m ³	OEB 4 1-10 µg/m ³	OEB 5 < 1 µg/m ³
Container	not covered, stored open	✓	✗	✗	✗	✗
	close with lid	✓	✓	✗	✗	✗
Plastic bag	close with ratch tape	✓	✗	✗	✗	✗
Lid bag	close with lid	✓	✓	✗	✗	✗
Herding SAFE CHANGE Bag-In / Bag-Out	close with ratch tape	✓	✓	✓	✓	✗
	close with clip	✓	✓	✓	✓	✓
continuous						
Big-Bag	closed with tapes	✓	✗	✗	✗	✗
Bag-In / Bag-Out	closed with ratch tape	✓	✓	✓	✓	✗
	closed with clip	✓	✓	✓	✓	✓
CLS* und Kunststoffschlauch	closed with ratch tape	✓	✓	✓	✓	✗
	closed with clip	✓	✓	✓	✓	✓
* optionally with additional containment levels	closed with weld seam	✓	✓	✓	✓	✓

Optional: Conducting a SMEPAC-Test

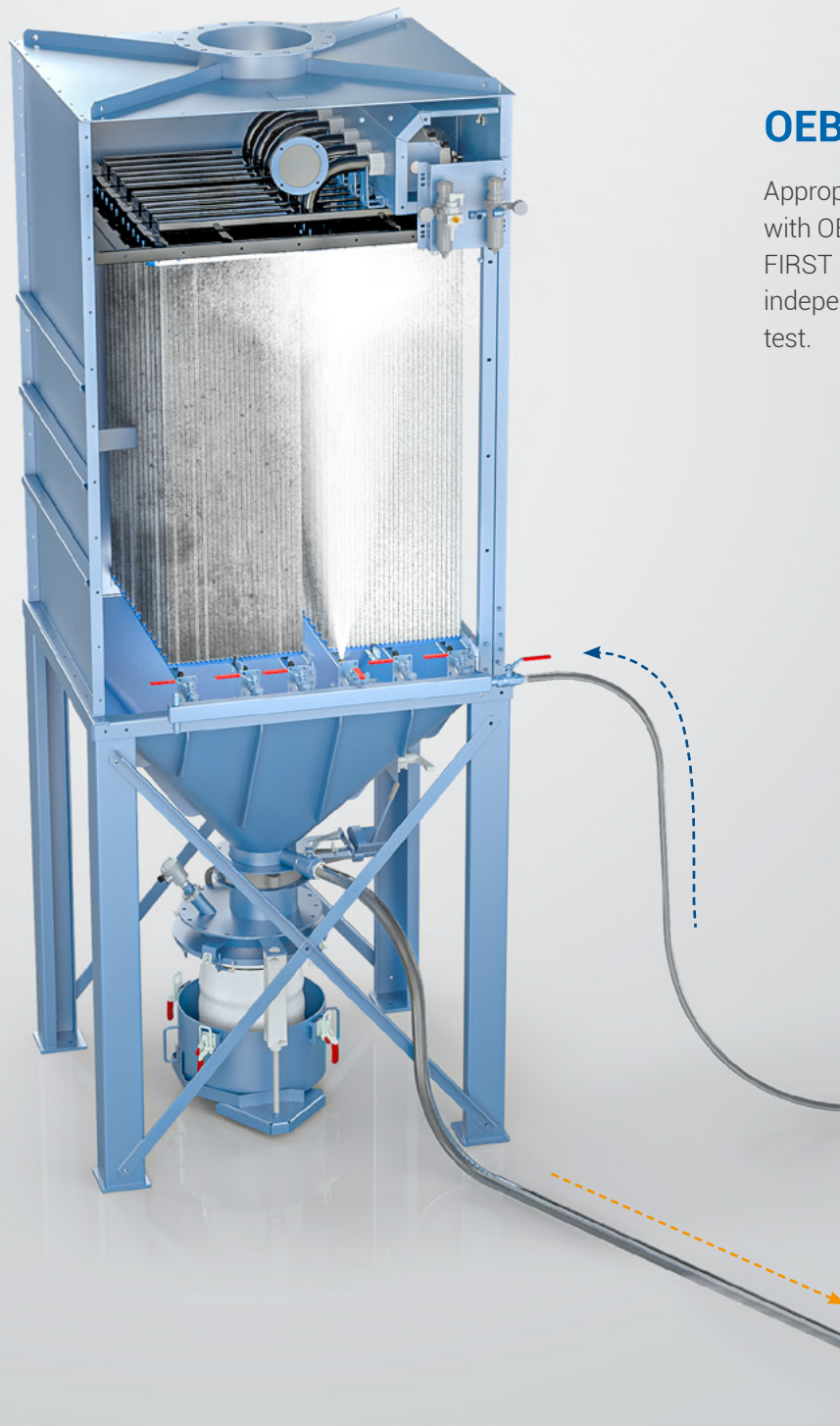
OEB information according to typical user definition

HERDING FIRST RINSE

Herding® Sinter-Plate Filters achieve service lives of more than 10 years and therefore need to be replaced very rarely. Removal of the filter elements is therefore not necessary during normal operation.

Herding FIRST RINSE is used when contamination-free replacement of the filter elements is required, for example when dusts containing active substances and/or toxic dusts are handled.

Directed targeted wetting of surfaces in contact with the dust prevents the toxic particles from being whirled up and thus dispersed in the air. The appropriately treated filter elements can thus be handled contamination-free.



OEB 5 SUITABILITY

Appropriate proof of compliance with OEB 5 when using Herding FIRST RINSE was provided by an independently conducted SMEPAC test.

HERDING SAFE CHANGE

Safe dust discharge and disposal at the interface with the highest frequency for the operator

The Herding SAFE CHANGE with Bag-In / Bag-Out meets the high requirements proven by the SMEPAC test.



HERDING MULTICOATER

The dosed addition of suitable additives to the filtration process can both reduce the risk of sticking of the filter media and reduce the combustibility of dusts.

Herding MULTICOATERS are pneumatically operated dosing devices for the quantity-controlled addition of additives into the filtration process.

Precoating creates a protective layer on the filter media. This prevents the direct contact of sticky and/or moist particles with the filter surface and thereby the clogging of it.



FURTHER OPTIONS

- Various dust discharges depending on required containment level from discontinuous container up to continuous CLS system including containment
- Secondary filter (with or without Bag-In/Bag-Out option) integrated and/or standing separately
- Central dust disposal systems

The explosion hazard from the organic dusts and solvents in the production of pharmaceutical solids require a protection concept tailored to the application.

Herding Filtertechnik provides the user with a wide-ranging portfolio of safety technology for filter systems. From consulting and selection of the suitable protection concept to the safe and ATEX-compliant design of the filter systems up to their installation, commissioning and maintenance.

The Sinter-Plate Filter offers a unique advantage: It is the only filter element on the market, whose rigid body acts as a DustEXZoneBarrier, which means that there is no dust-explosive atmosphere on the clean gas side of the filter system.

HERDING FLAMELESS

Clean-gas side, flameless and smoke-free pressure relief



EXPLOSION PROTECTION-CONCEPTS

Preventive, primary measures

Avoiding explosive atmospheres by separating processes into sections with and without organic solvents

Preventive, secondary measures

Avoiding effective ignition sources in filter systems.

In many applications, preventive measures are sufficient to safely avoid explosions in the filter system

Constructive, tertiary measures

Reducing the effect of the explosion event in the filter system

- Explosion-proof design (Herding RESIST)
- Raw-gas side pressure relief (e.g. with explosion panel)
- Raw-gas side flameless pressure relief
- Clean-gas side flameless and smoke-free pressure relief (Herding FLAMELESS)
- Explosion suppression
- Volume limitation (Herding PHARMEX)



CONTACT

Please feel free to contact us! You can fill in the form and send it to us by e-mail.

Company

First name

Family name

Phone

E-mail

Branch

Application

Comments

Herding® is a registered trademark // V1.2

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