



# HOSOKAWA BEPEX GmbH

*Technologies for compaction, briquetting, extrusion and spheronization*

## *news* **LETTER**

2005 – No. 2



**POWTECH 2005**

Nuremberg 11 – 13 October 2005

Hosokawa Bepex GmbH presents during  
POWTECH 2005:  
New Products for

- Pharma
- Chemicals
- Minerals und Metals

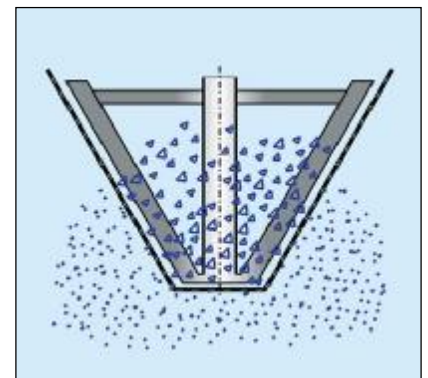
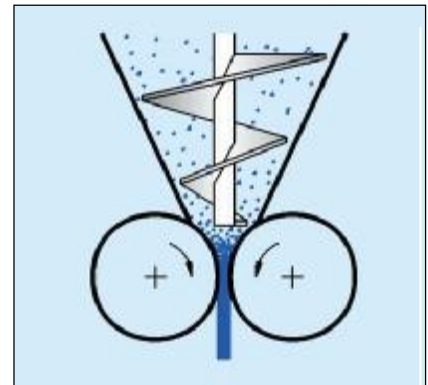
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## Our highlights

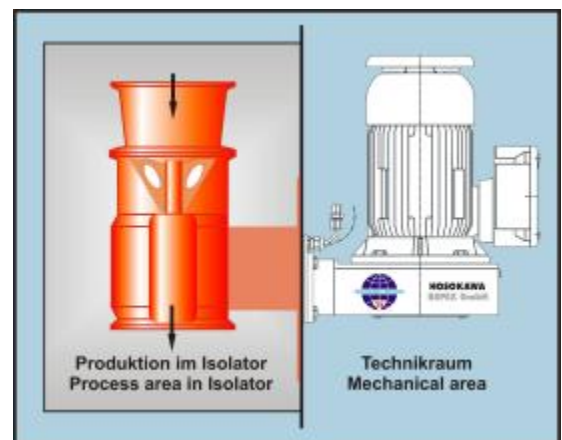
### **NEW! - Pharmapaktor® C 250**

- Cantilever rolls
- New concept for exchange of rolls
- Variable roll gap under full load
- Roll cooling system
- Electronic press force measurement
- Vacuum system
- Automation and data recording
- GAMP 4 und 21 CFR part 11
- for more details, please see p. 3



### **BEXMILL in Isolator** **For High End Pharmaceutical Products**

- For processing toxic or high purity products
- Suitable for ATEX-Zone 1/21
- WIP design
- for more details, please see p. 4



### **Compaction Without Contamination**

Is your product contaminated by wear or corrosion?

We have the solutions for you.

For more details, please see p. 5.





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## **New Generation of Roller Compactors**

### **Pharmapaktor® C 250**

The new generation of the Pharmapaktor® offered now by Hosokawa Bepex considers all relevant and increased requirements of the pharmaceutical industry.

An integrated parameterisation and full instrumentation is provided.

The design of the mechanical parts considers easy assembly and reduced weight of the components to ensure easy and perfect cleaning.

The cantilever shafts and the new roll fixing design allows simple assembly without special tools and is easy also for untrained staff.

A roll cooling system is available; the water supply is effected from the rear and therefore, there are no rotary unions in the process area.

The roll gap is adjustable under full load and in operation. Furthermore, the machine possesses an electronic and direct press force measurement without hydraulic components.

The automation systems offers either the press force or the roll gap as command variables, all other operation parameters are automatically adjusted and ensure an operation within a very narrow range. All operating data is recorded in a data base and can be visualized as graphics.

GAMP 4 (Good Automated Manufacturing Practice), the guideline for validation of computer systems is included as well as 21 CFR part 11

A pre-breaker and a Flake Crusher for the final product sizing are part of the total system.

All parts in contact with the material to be processed are made of stainless steel 316L.

The surface finish is made according to the user requirement specifications.

The cGMP rules and the FDA guidelines are self-evident.



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## **BEXMILL in Isolator**

### **Technology for High Potential Pharmaceuticals and Chemicals**

By integrating the proven conical mill (BEXMILL) into an isolator, Hosokawa Bepex has succeeded in meeting the stringent demands of the pharmaceutical industry with respect to product and personal protection when processing high potential pharmaceuticals and chemicals.

The BEXMILL is suitable for a wide range of applications:

- Deagglomeration
- Crushing of roller compacted flakes
- Grinding of oversized particles
- Sizing of product at the inlet of an air jet mill

Various mill screens, round hole or rasp type are available to accomplish any process requirement. The minimal airflow does not require additional filter systems.

The BEXMILL does not need any dosed feed, but can totally be flood fed.

For isolator purposes, two sizes are available which are also ideal for R&D work.

The mill is suitable for ATEX-Zone 1/21.

The isolator is operated under negative pressure and permits an "operator exposure level" OEL of  $< 1 \mu\text{g}/\text{m}^3$ .

The  $\alpha/\beta$  transfer system permits low-contamination inward and outward transfer.

The isolator is made completely of stainless steel AISI 316 L with an inside surface roughness of  $R_a \leq 0.8 \mu\text{m}$ .

The system is also equipped with an integrated WIP (washing in place) cleaning system.





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## **Compaction without Contamination**

### **Press Agglomeration of Corrosive and Abrasive Materials**

Fine dispersed bulk materials are processed with roller compactors to hard flakes and briquettes.

Extremely abrasive and corrosive products cannot be processed with usual materials of construction.

Wear and corrosion create metal removal at the press rolls and other contact parts and result in high process cost and contamination of the products to be processed.

In order to improve the service life of the equipment but also to work with low or totally without contamination, new materials of construction have been developed and are now successfully used in production plants.

Conventional protections against wear can bring the cost to a reasonable level, but contamination in the range of ppm is still a problem. The efficiency of semiconductors and refractories can be considerably reduced.

A matrix for the selection of the most adequate materials of construction is now available. Some examples are hydrocarbon coatings, plasma surface coatings and ceramic materials.

These results are further improving the advantages of roller compaction:

- Dry process
- Low energy consumption
- Low product heating
- Dust free processing
- Consistent result
- Automatic control

The new technologies offer many options for semiconductors, glass batches, ceramics, pigments and pharmaceutical applications.