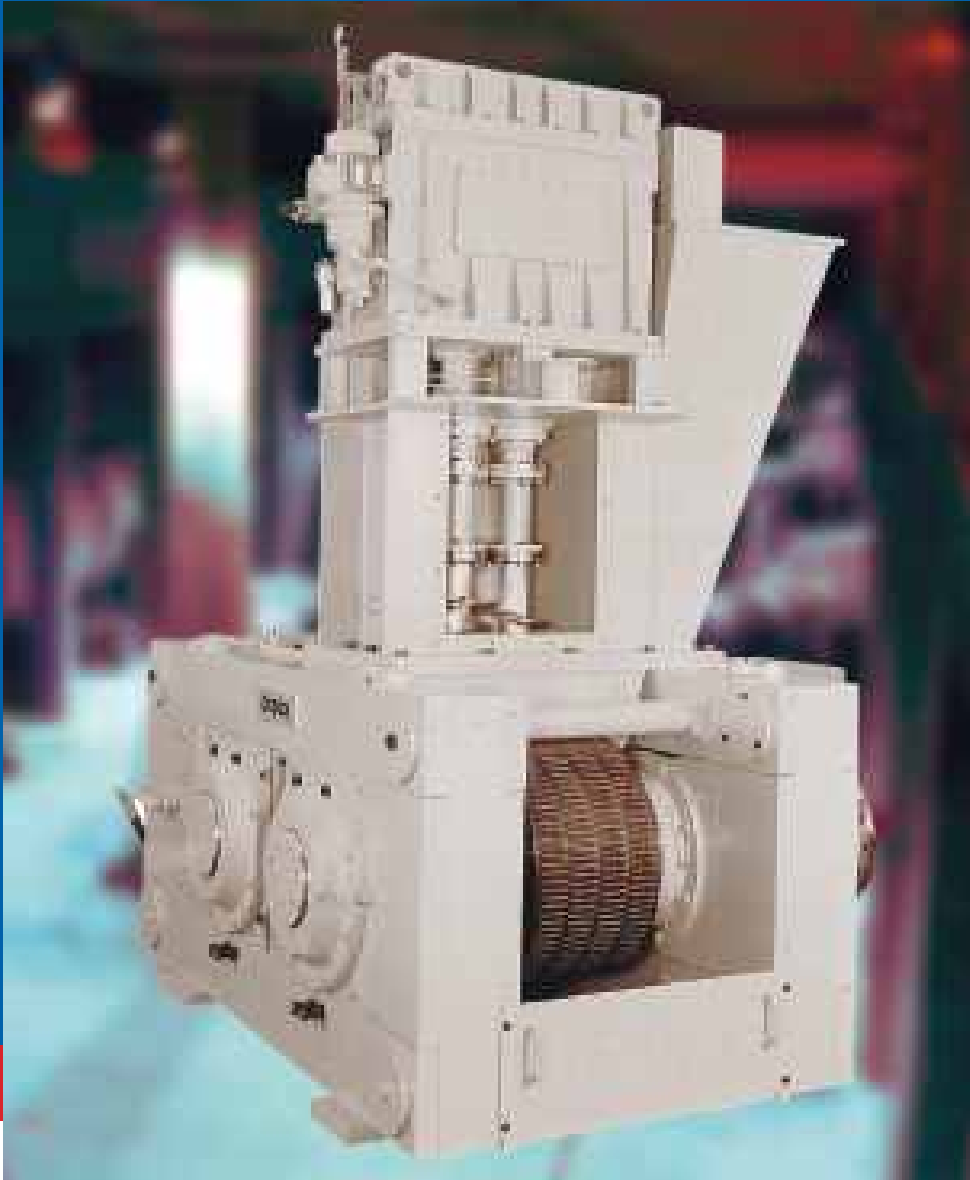
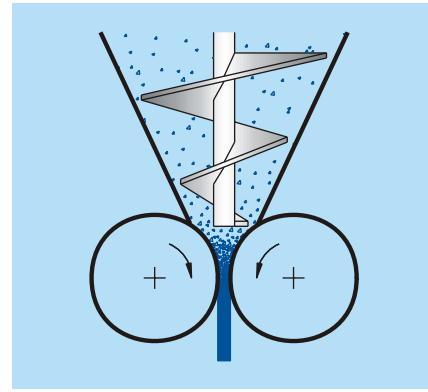


# ROLLER COMPACTORS FOR MINERALS, METALS AND CHEMICALS



**HOSOKAWA BEPEX GmbH**

# Compaction and Briquetting Densification and Particle Sizing



## Compaction

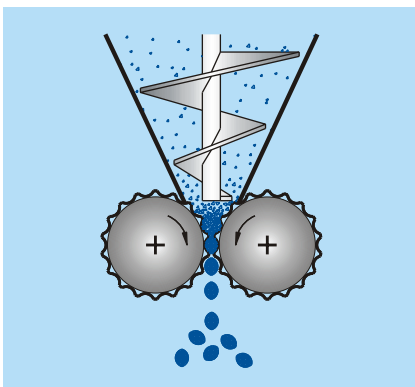
Powder is compressed into a solid form called flakes. Compressing the powder into flakes increases the bulk density of the material for the final product.

## Dry Granulation

The flakes produced by compaction are gently milled to the required particle size distribution as required by the process. Sieving or classification can also be performed to achieve a tighter distribution.

## Compaction Benefits:

- Insures good flow properties
- Increases bulk density
- Particle size control
- Low energy consumption
- Minimal product heating
- Dust free processing
- Good dosing properties
- Consistent & reproducible results



## Briquetting

Briquetting processes utilize specially made compaction rolls enabling production of a variety of sizes and shapes. Typical examples include:

- Pillow shapes
- Almond shapes
- Stick shapes

Synchronized counter-rotating rolls and very tight tolerances insure a consistent end-product.



*A wide range of sizes and shapes.*

# Standard Features for Tough Applications



Based on the width of the compacting rolls, single or multiple feed screws are used. The goal is to insure proper feed distribution of material across the roll face, for consistent product quality and maximum roll life.



## KOMPAKTOR Front Side

- ① Press Frame
- ② Hydraulic Cylinders
- ③ Screw Feeder
- ④ Roll gap sensor

## KOMPAKTOR Drive End

- ⑤ Dual output shaft reducer
- ⑥ Gear couplings with roll timing device
- ⑦ Flexible coupling, Safety coupling
- ⑧ Roll drive motor
- ⑨ Hydraulic pump unit
- ⑩ Automatic lubrication system



# Custom Designs for Demanding Applications



An easily removable panel allows access to the feed screw. The screw can be removed from the machine without disturbing the drive assembly.

Housing of the compacting rolls for gas and dust-tight operation especially important when poisonous products are processed or the process is executed under protective gas.



## Design Details:

- Electronic press force measurement
- Automatic press force control
- Roll cooling system
- Adjustable roll gap
- Press frame made of stainless steel (option)

In handling fine, low bulk density materials a vacuum system is used to evacuate air from the product.



Heavy-duty **KOMPAKTOR** for high capacity compaction in the chemical industry. All parts in contact with the product are made of stainless steel. The machine is designed to contain a positive pressure in the product zone for inert gas purging.

# Press Rolls and Feed Screws

## Working Parts designed for each Application



**Integral roll**  
Options for alloy overlay against corrosion or welded-on hardfacing.



**Roll tires**  
offer an optimum balance between service life and economy, either made of stainless steel or tool steel, both with surface heat treatment.



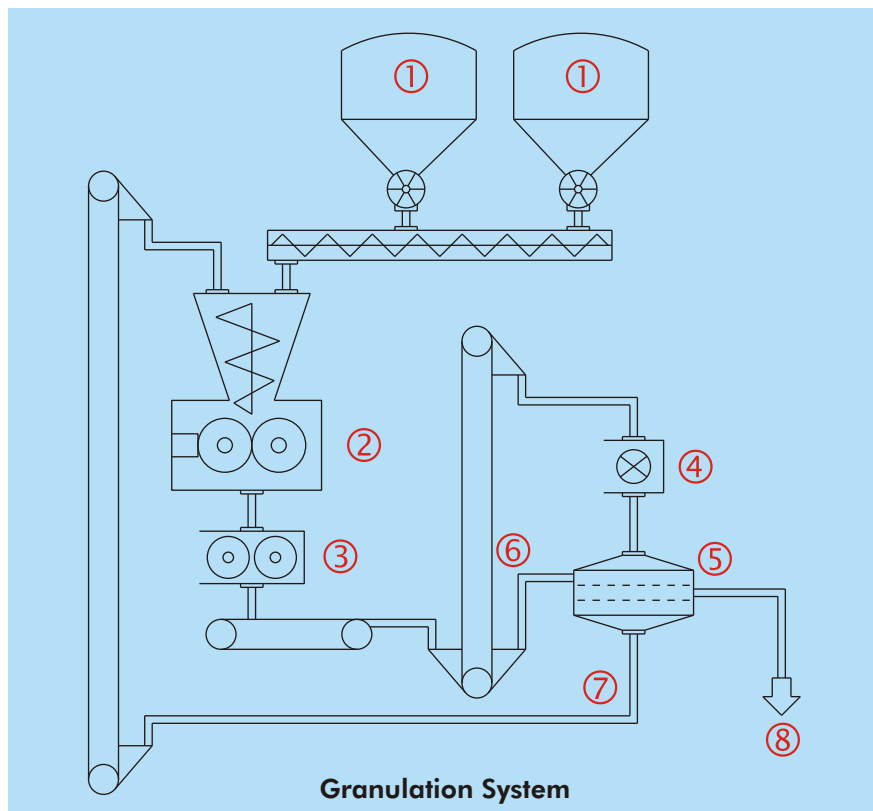
**Feeder designs**  
The compression ratio of the feeder is adapted to the product. Made of stainless steel or with welded-on wearing protection.



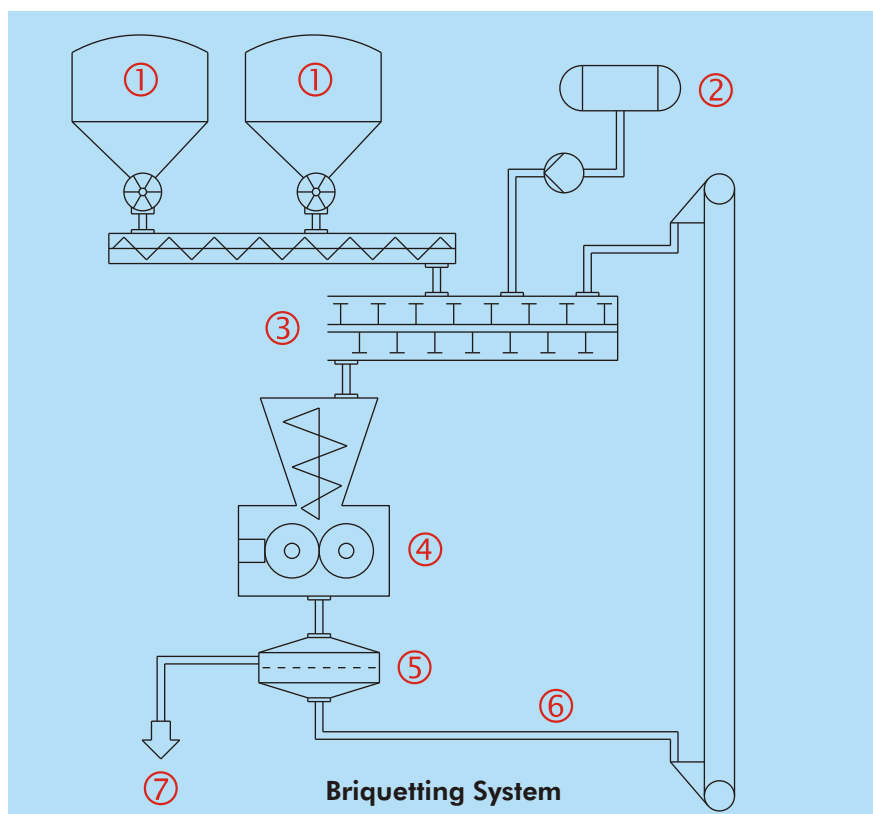
**Segmented Rolls**  
For hot and abrasive products. Segments can be replaced without removing the roll from the machine.



# Granulation and Briquetting Proven System Technology



- ① Product
- ② KOMPAKTOR
- ③ Pre-Crusher
- ④ Impact Mill
- ⑤ Screen
- ⑥ Recycle coarse
- ⑦ Recycle fines
- ⑧ Product Granules



- ① Product, Solid Binder
- ② Liquid Binder
- ③ Mixer
- ④ KOMPAKTOR
- ⑤ Screen
- ⑥ Recycle fines
- ⑦ Product Briquettes

Certain products do not require binders.



# Process Technology

## Single-source Expertise

### The BEPEX test lab

Several sizes of roll compactors are available in the Bepex test lab, allowing us to show feasibility and demonstrate the performance of our systems on your materials. Our engineers combine years of experience with the information gained from your specific application to deliver the optimum product for your requirements. After the test, you will receive a detailed report and materials samples.

**Our experience results in your total satisfaction.**

### Plant construction

#### Engineering

#### Automation

We do not only deliver machines, but the complete plant with all accessories including the controls and automation.

Thus the processing technique is reliably transformed into an industrial plant with full function guarantee.

### Range of capacity:

Compactors are laid out according to the product to be processed.

The combination of different press frames, roll diameters and drive groups entails a very big range of capacity, which fulfils all requirements of the industry.

### ...and more

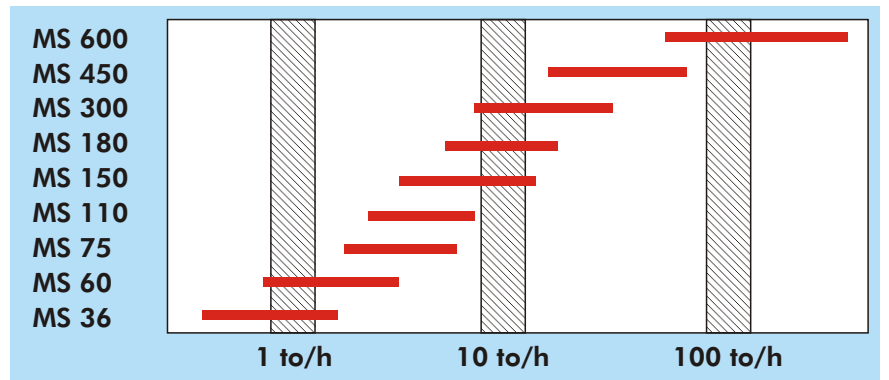
Along with roller compactors, our lab is fully equipped with the necessary auxiliary equipment to perform a variety of powder processing functions including mixing, screening and milling. Our analytical lab contains the equipment needed to verify the most important physical properties of your feed material and the products produced.



*Pilot plant*

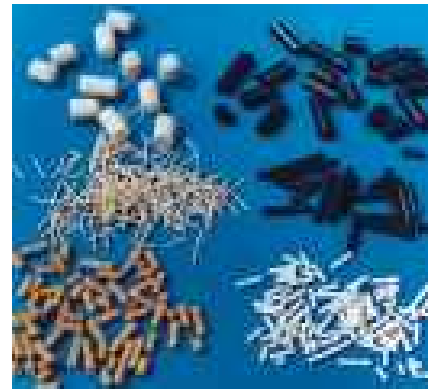


*KOMPAKTOR in a factory for potassium chloride. Capacity over 100 to per hour; roll drive motor 800 kW*



# BEPEX Agglomeration Technology

## We bring your powder into shape



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**Delivery address:**  
Daimlerstr. 8  
D-74211 Leingarten / Germany

### The BEPEX Technologies

Machines and complete plants for

- Compaction
- Briquetting
- Granulation
- Size reduction
- Pelletizing
- Extrusion
- Spheronization



**HOSOKAWA BEPEX GmbH**

Hosokawa Bepex GmbH is a member of the Hosokawa Micron Group, responding to global needs through emphasis on materials science and engineering. The Group is an international provider of equipment and technology for powder and particle processing, plastics processing and confectionery products. The Group maintains facilities for research, engineering, manufacturing and service in each of the world's major industrial markets.

**Internet**

**<http://www.hosokawamicron.com>**