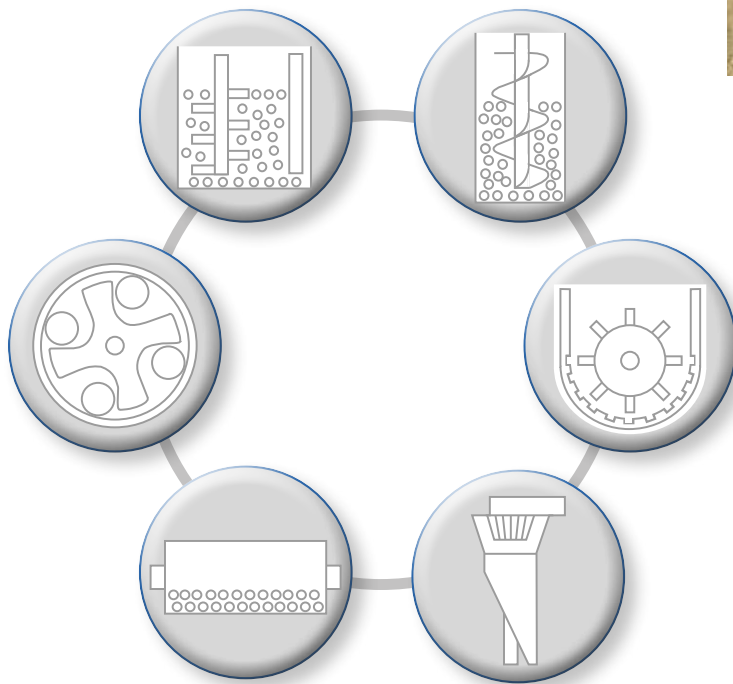


## Grinding solutions

Industrial minerals, ores

Raw materials for ceramics, glass, fertilizers

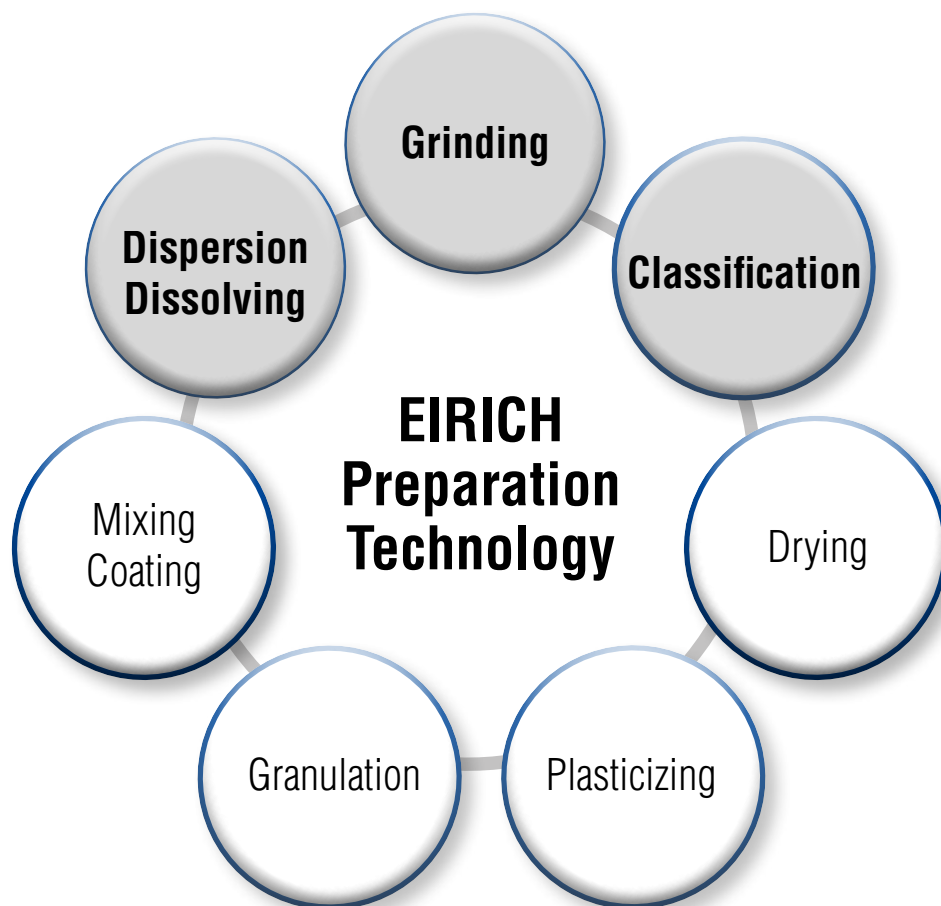


# Grinding solutions – custom-tailored and effective

**Grinding** is an **important process step** in the preparation of raw materials through to the recycling of residues. The effectiveness and efficiency of the size reduction process have a critical influence on the **cost-efficiency** of the production process as a whole. In addition the selection of the optimum grinding solution has a vital influence on the **quality** of the finished product.

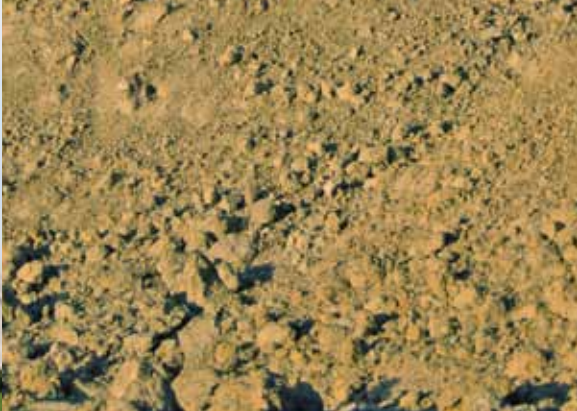
**Grinding technology has a long tradition at EIRICH.** Starting with a mill workshop in 1863, a constant flow of new mills have been developed and manufactured over the years for a wide spectrum of applications.

Today EIRICH offers a **range of mills and supplementary units** for the very fine grinding of soft to very hard materials. They are also used for wet and dry grinding of very hard and highly abrasive materials.



EIRICH stands for a comprehensive range of products and services in the field of industrial preparation technology.





Active coal
Alumina
Barite
Bauxite
Bentonite
Brucite
Calcium carbonate
Carbon black
Cement
Ceramics
Chamotte
Clay
Copper ore
Dolomite
Feldspar
Fertilizer
Fly ash
Glass
Glazes
Gold ore
Graphite
Gypsum
Hydrated lime
Iron ore
Kaoline
Magnesite
Olivine
Pitch coke
Pigments
Potash
Refractories
Quicklime
Rock phosphate
Slag
Talc
Titanium ore
Titanium dioxide
Zirconium oxide



# Grinding and classifying – the right way!

EIRICH offers a broad range of different types of mills that are designed for the **dry and wet grinding of brittle materials**. It is a well known fact that there is no single mill that is optimally suitable for every size reduction task.

The selection of the right grinding system for each specific task is therefore critical for ensuring that the desired results are achieved in terms of quality and economics.

On the basis of the available systems with grinding and classifying technology, we develop a concept for you which is suitable for your individual application. In this connection the use of our own test grinding systems has proved particularly valuable, especially for challenging size reduction tasks, feasibility studies or customer-specific optimization.

**Make the most of these possibilities – our professional team will be glad to advise you!**



## MaxxMill®

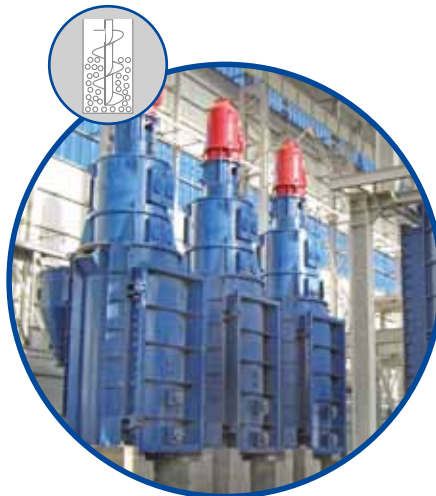
**Vertical agitated media mill**

**Dry and wet grinding**, also iron free, of brittle and very abrasive materials

**Final product:**  $d_{97} = 5$  up to  $150\ \mu\text{m}$

**Feed material:** up to 2 mm

**Hardness:** up to 9 Mohs



## TowerMill

**Vertical agitated media mill**

**Dry and wet grinding** of brittle and abrasive materials

**Final product:**  $d_{80} = 20$  up to  $150\ \mu\text{m}$

**Feed material:** up to 10 mm

**Hardness:** up to 7 Mohs



## FluxxMill

**Horizontal ball mill**

**Dry grinding**, also iron free, of brittle and very abrasive materials

**Final product:**  $d_{97} = 20$  up to  $500\ \mu\text{m}$

**Feed material:** up to 30 mm

**Hardness:** up to 9 Mohs

<sup>1)</sup> *Drying with hot gas possible*



Grinding/MaxxMill®

Dispersion/MixSolver®



### TurboGrinder

**Impact mill** with incorporated air classifier

**Dry grinding, disagglomeration**  
of brittle and less abrasive materials

**Final product:**  $d_{97} = 20$  up to  $400 \mu\text{m}$   
**Feed material:** up to  $30 \text{ mm}$   
**Hardness:** up to 3 Mohs



### OrbitMill®

**Centrifugal ball mill** with incorporated air classifier

**Dry grinding**  
of brittle and abrasive materials

**Final product:**  $d_{97} = 20$  up to  $400 \mu\text{m}$   
**Feed material:** up to  $20 \text{ mm}$   
**Hardness:** up to 5 Mohs



### MaxxClass

**Dynamic air classifier**

- For inline and offline classification
- Single and multi wheel design
- Wear protected design possible

**Fines:**  $d_{97} = 5$  up to  $300 \mu\text{m}$

# EIRICH Systems Engineering

## The complete "one-stop" solution

### Processes, Engineering, Machines, Equipment, Control and Service

EIRICH offers system concepts with the lowest possible number of organizational interfaces. This ensures that the project is handled extremely efficiently, with consistent implementation from the planning stage right through to commissioning. If the conditions at the site permit, EIRICH are capable of installing completely new technology even while the system is running.

The use of state-of-the-art modular systems engineering also offers additional benefits which can drastically reduce on-site outlay.

### Expertise in systems engineering – worldwide

- New installation
- Conversion
- Modernization
- Expansion
- Optimization



Granulating mixer  
Control system



TurboGrinder  
Systems engineering





# Testing and optimization at the EIRICH Test Center

The EIRICH Group has test grinding systems at three locations **around the world**. These are used for developing custom-tailored grinding solutions together with customers and users. They can take the form, for example, of feasibility studies for challenging grinding tasks, scale-up trials or customer-specific optimizations.

We therefore make both **laboratory mills** for the grinding of small volumes and **grinding systems** for long-time production scale testing available to our customers. The EIRICH test laboratories are equipped with modern particle and bulk material measuring equipment.



## **Maschinenfabrik Gustav Eirich GmbH & Co KG**

### **Equipment:**

Grinding: MaxxMill®  
Classifying: MaxxClass  
Dispersion: MixSolver®  
Test laboratory



## **Eirich Impianti S.r.l.**

### **Equipment:**

Grinding: OrbitMill®, FluxxMill, TurboGrinder  
Classifying: MaxxClass  
Dispersion: MixSolver®  
Test laboratory



## **Nippon Eirich Co., Ltd.**

### **Equipment:**

Grinding: TowerMill  
Classifying: Hydrocyclone  
Dispersion: MixSolver®  
Test laboratory

## Industrial Mixing and Fine Grinding Technology

### Tradition and innovation since 1863

EIRICH stands worldwide for a comprehensive range of products and services in the field of preparation technology. Its particular focus is on mixing and fine grinding technology, with know-how developed over 150 years of close cooperation with industrial users, universities and research institutions.

Pursuing a corporate philosophy of operating internationally and thereby ensuring close proximity to every customer, the EIRICH Group has secured its place in all the key economic regions of the world.

The focus is on innovative technology for machinery and systems engineering designed to offer solutions for high-standard preparation tasks from a single source.

Applications and process technology with own test centers, a high vertical range of production and comprehensive after-sales service provide the ideal basis for the development of modern and economical processes for a multitude of industries.

**Building materials – Ceramics – Glass – Carbon paste – Battery paste  
Friction linings – Metallurgy – Foundries – Environmental protection**

#### The EIRICH Group worldwide:



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**Eirich Maschinentchnik**  
Almaty, Kasachstan



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Gurnee, IL, USA



**Eirich Industrial Ltda.**  
Jandira S.P., Brazil



**Nippon Eirich Co. Ltd.**  
Nagoya, Japan



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Seoul, Republic of Korea



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Mumbai, India



**H. Birkenmayer (Pty.) Ltd.**  
Isando, Republic of South Africa

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