

Highest demands,  
toughest conditions,  
coarsest materials -  
time for **EFFICIENT  
PROCESSES.**

## Christian Pfeiffer worldwide

### Headquarters

Christian Pfeiffer Maschinenfabrik GmbH  
Sudhoferweg 110-112  
59269 Beckum  
Germany

Phone +49 2521 849-0  
Fax +49 2521 849-123  
office.de@christianpfeiffer.com

### Branch Office Liezen

Werkstrasse 5  
8940 Liezen  
Austria

Phone +43 3612 270-4101  
Fax +43 3612 270-4118  
office.at@christianpfeiffer.com

### Bolivia

Christian Pfeiffer Latinoamericana S.A.  
+591 3 9232875  
office.bol@christianpfeiffer.com

### China

Christian Pfeiffer Cement Machinery  
(Suzhou) Co. Ltd.  
+86 512 5235 8378  
office.cn@christianpfeiffer.com

### India

Christian Pfeiffer India Pvt. Ltd.  
+91-0120-2554595  
office.in@christianpfeiffer.com

### Malaysia

CPB Engineering Sdn Bhd  
+60 3 62112358  
office.my@christianpfeiffer.com

### North America

American Pfeiffer Corporation  
dba Christian Pfeiffer America  
+1 (610) 356 6995  
office.us@christianpfeiffer.com

### WOGEMA

WOGEMA GmbH  
+43 676 88271896  
office@wogema.at

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More than just grinding and separation:  
**EFFICIENT PROCESSES**

We understand, analyze and optimize the entire grinding process. Thanks to this expertise, Christian Pfeiffer has been one of the technology leaders in the grinding industry for over 90 years.

## Mining

Visit us at  
[christianpfeiffer.com](http://christianpfeiffer.com)



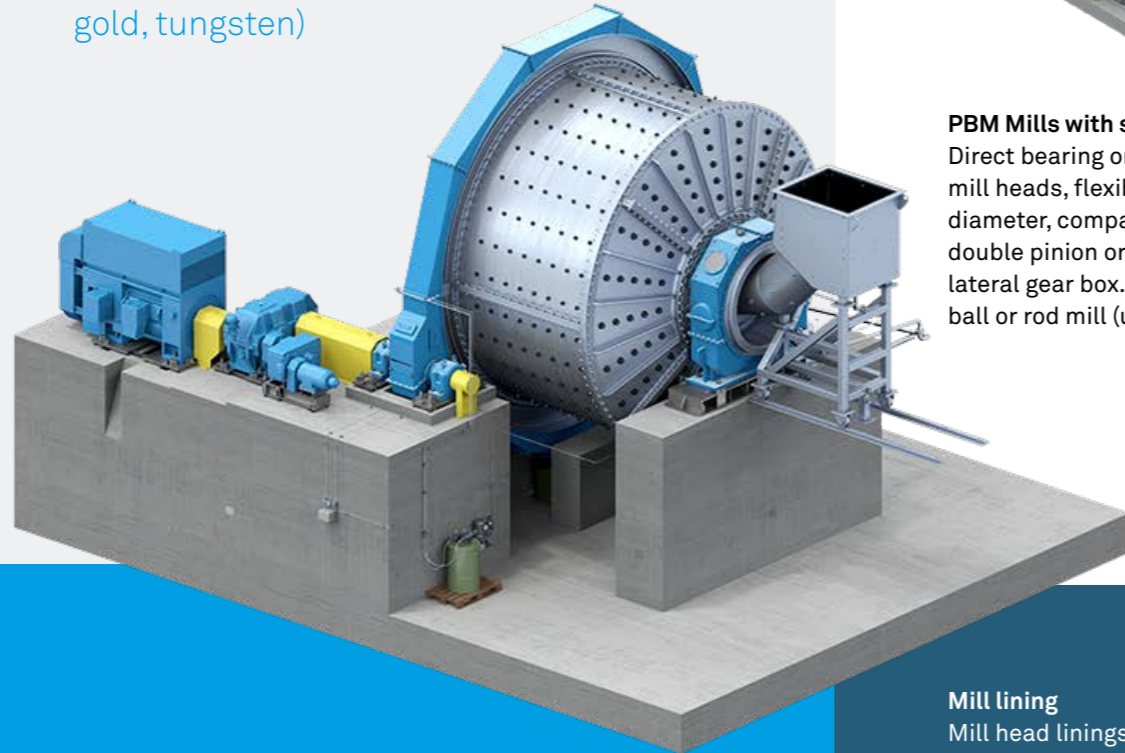
# We optimize the **mining industry**

The grinding result is a matter of details. As process specialists, we optimize these details and turn them into more efficient plants. This is what we call **EFFICIENT PROCESSES**.

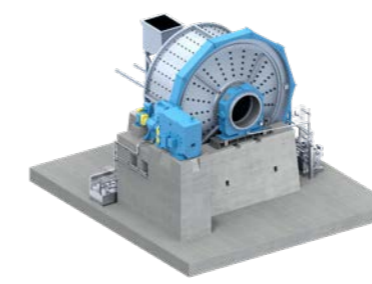
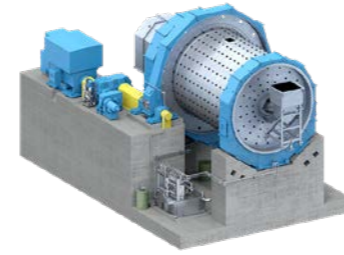
Grinding processes belong to the most energy-consuming industrial tasks of our time. As experts for efficient processes we are familiar with numerous aspects that leave plenty of space for improvement. We fine-tune all details and thus, not only deliver the best grinding results but especially plants and components of outstanding robustness, reliability and service life.

We offer the full range of services relating to grinding plants and process optimization. From single components to complete systems.

- powerful grinding plants
- durable, perfectly adjusted components
- plant-specific process optimization
- Plants for wet grinding of quartz sand or ores (e.g. iron, copper, gold, tungsten)



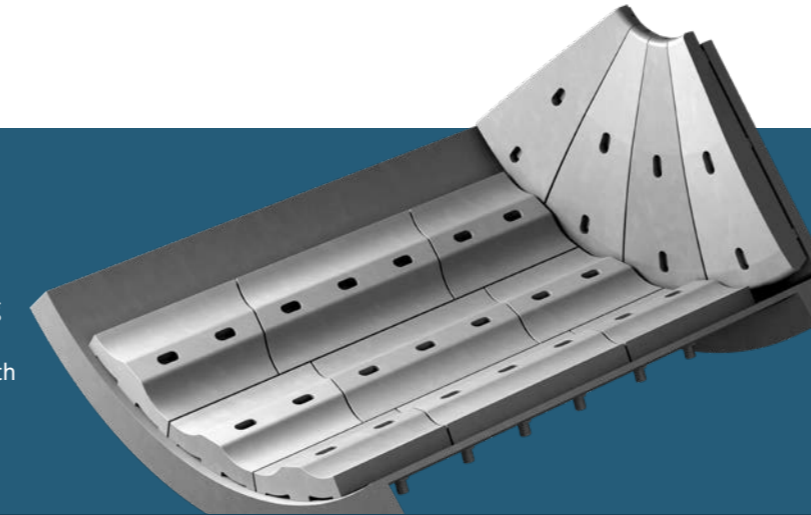
## Our mills for your demands



**PBM Mills with slide shoe bearings**  
Direct bearing on the mill shell, casted mill heads, flexible inlet & outlet diameter, compact drive with single/double pinion or directly flanged lateral gear box. Can be operated as ball or rod mill (up to  $\varnothing$  4.60 m).

**RBM/TBM Trunnion bearing mills**  
Conventional with slide bearings and oil circulation lubrication or with roller bearings and grease lubrication, drive with single/double pinion or directly flanged lateral gear box. Can be operated as ball or rod mill (up to  $\varnothing$  4.60 m).

**SGM Autogenous/semi-autogenous mills**  
With trunnion bearings or slide shoe bearings, drive with single/double pinion or directly flanged lateral gear box. Can be fed directly from primary crushers and replace further crushing stages. Achieve very high throughputs of >1000 tph.

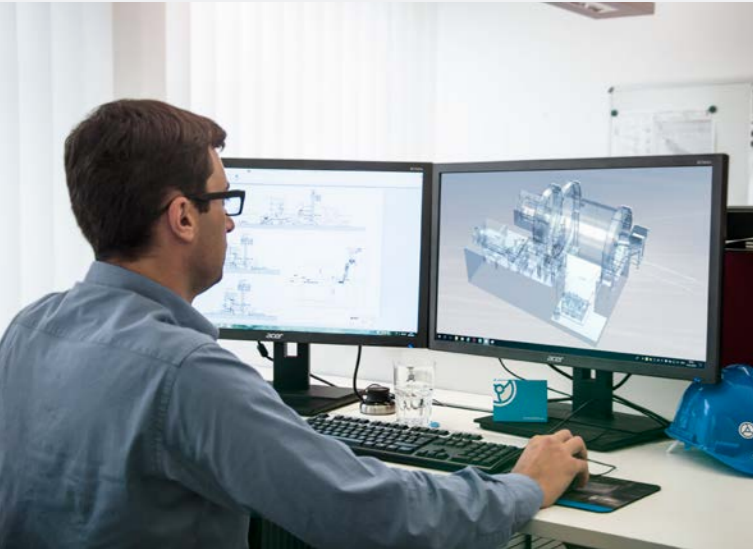


**Mill lining**  
Mill head linings and shell linings are modified according to mill size, grinding media and process: Plates and lifting elements made of steel or steel-rubber combination are made of chromium cast steel or cast manganese steel with pre-defined wear zones for constant performance.

## From process analysis to tailor-made plants

For optimum grinding results, we combine expertise on many levels. In the field of engineering, we put emphasis to the design of efficient, robust components.

During commissioning of our plants, a process-technological adjustment and a particle size analysis are carried out. The subsequent optimization ensures a smooth performance of your mill and operation of all components at full capacity.

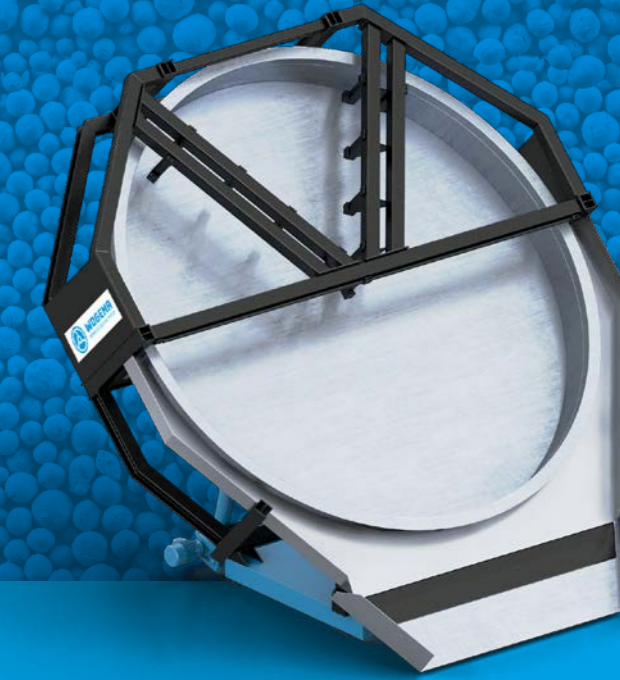


## Reference project in record time

In Aljustrel, Portugal, we have erected a new ball mill first grinding stage for Almina - Minas do Alentejo, S.A. The mill with  $\varnothing$  4.2 m (330 tph of abrasive ores with trace materials such as pyrite and quartz) was engineered and delivered within 6 months. Commissioning was carried out with minimum downtime.

Projects in the mining sector were implemented worldwide, including South Africa, Russia and Greece.

Efficient Partners -  
Christian Pfeiffer and  
WOGEMA



## Pelletizing plants from WOGEMA

As part of Christian Pfeiffer, WOGEMA is the expert for pelletizing plants for the most diverse requirements. With these innovative machines, downstream processes such as pelletizing of ground and concentrated iron ore are optimized significantly. This is also part of **EFFICIENT PROCESSES**.

| Ball mills       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| Diameter [m]     | 2,2  | 2,4  | 2,6  | 2,8  | 3,0  | 3,2  | 3,4  | 3,6  | 3,8  | 4,0  | 4,2  | 4,4  | 4,6  | 4,8  | 5,0   | 5,2   | 5,4   | 5,6   | 5,8   | 6,0   |
| Length [m]       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |
| L/D 1,5          | 3,25 | 3,50 | 4,00 | 4,25 | 4,50 | 4,75 | 5,00 | 5,50 | 5,75 | 6,00 | 6,25 | 6,50 | 7,00 | 7,25 | 7,50  | 7,75  | 8,00  | 8,50  | 8,75  | 9,00  |
| L/D 2,0          | 4,50 | 4,75 | 5,25 | 5,50 | 6,00 | 6,50 | 6,75 | 7,25 | 7,50 | 8,00 | 8,50 | 8,75 | 9,25 | 9,50 | 10,00 | 10,50 | 10,75 | 11,25 | 11,50 | 12,00 |
| Motor Power [kW] |      |      |      |      |      |      |      |      |      |      |      |      |      |      |       |       |       |       |       |       |
| L/D 1,5          | 200  | 250  | 315  | 450  | 560  | 710  | 850  | 1050 | 1250 | 1500 | 1750 | 2050 | 2450 | 2800 | 3150  | 3550  | 4000  | 4600  | 5100  | 5700  |
| L/D 2,0          | 315  | 355  | 500  | 600  | 750  | 950  | 1150 | 1400 | 1650 | 2000 | 2400 | 2750 | 3250 | 3700 | 4200  | 4800  | 5400  | 6100  | 6700  | 7600  |

| Autogenous/semi-autogenous mills |      |      |       |       |       |       |       |       |       |
|----------------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|
| Size [ft]                        | 18x8 | 20x8 | 22x10 | 24x10 | 26x10 | 28x12 | 30x12 | 32x14 | 34x15 |
| Diameter [m]                     | 5,50 | 6,10 | 6,70  | 7,30  | 7,93  | 8,54  | 9,15  | 9,75  | 10,40 |
| Length [m]                       | 2,40 | 2,40 | 3,00  | 3,00  | 3,00  | 3,70  | 3,70  | 4,30  | 4,60  |
| AG Power [kW]                    | 700  | 950  | 1400  | 1600  | 2200  | 3000  | 3600  | 4900  | 6200  |
| SAG Power [kW]                   | 1200 | 1700 | 2200  | 2700  | 3800  | 5500  | 6600  | 8200  | 10400 |