

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

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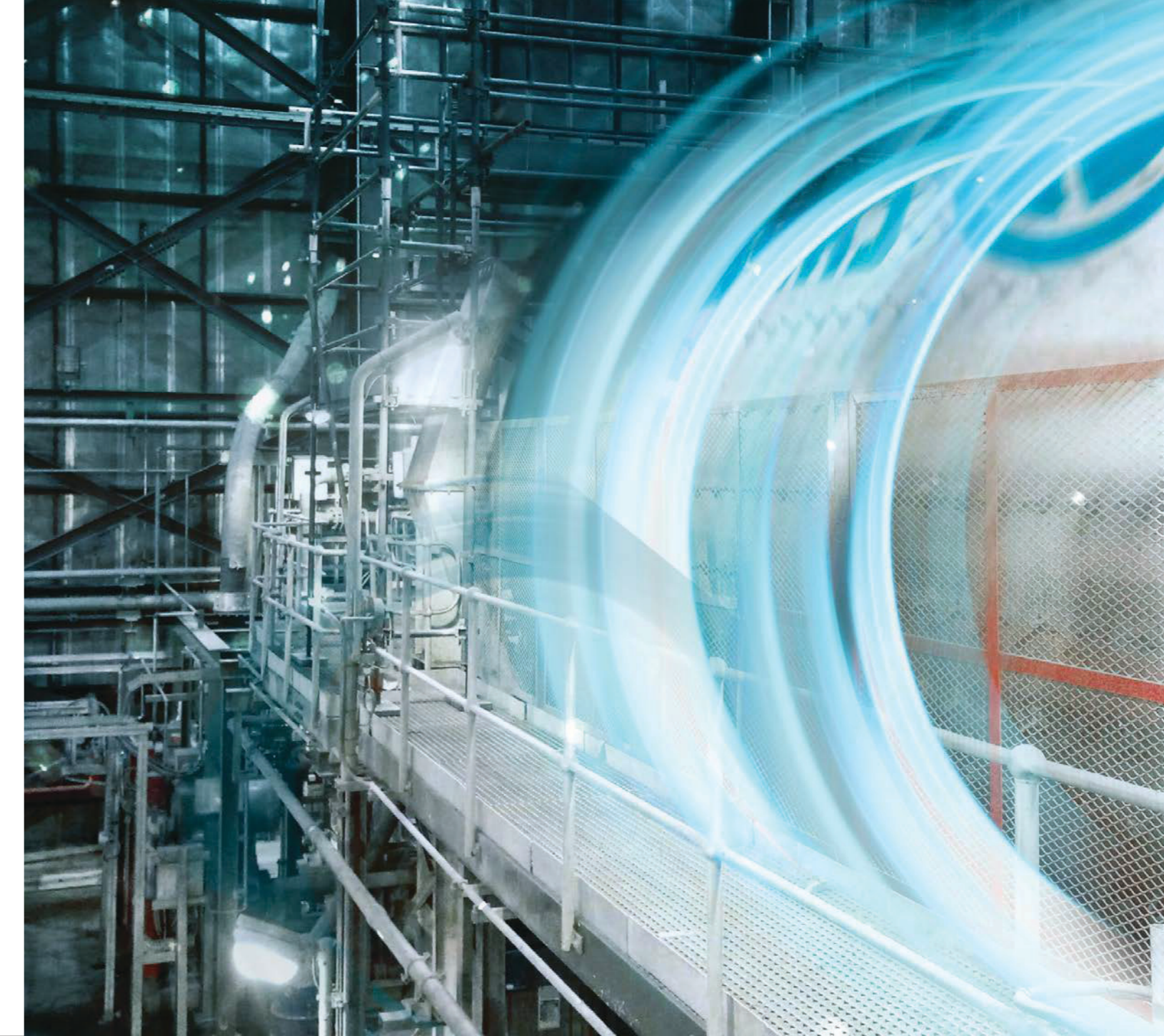
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More than just grinding and separation:  
**EFFICIENT PROCESSES**

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

## Mining

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



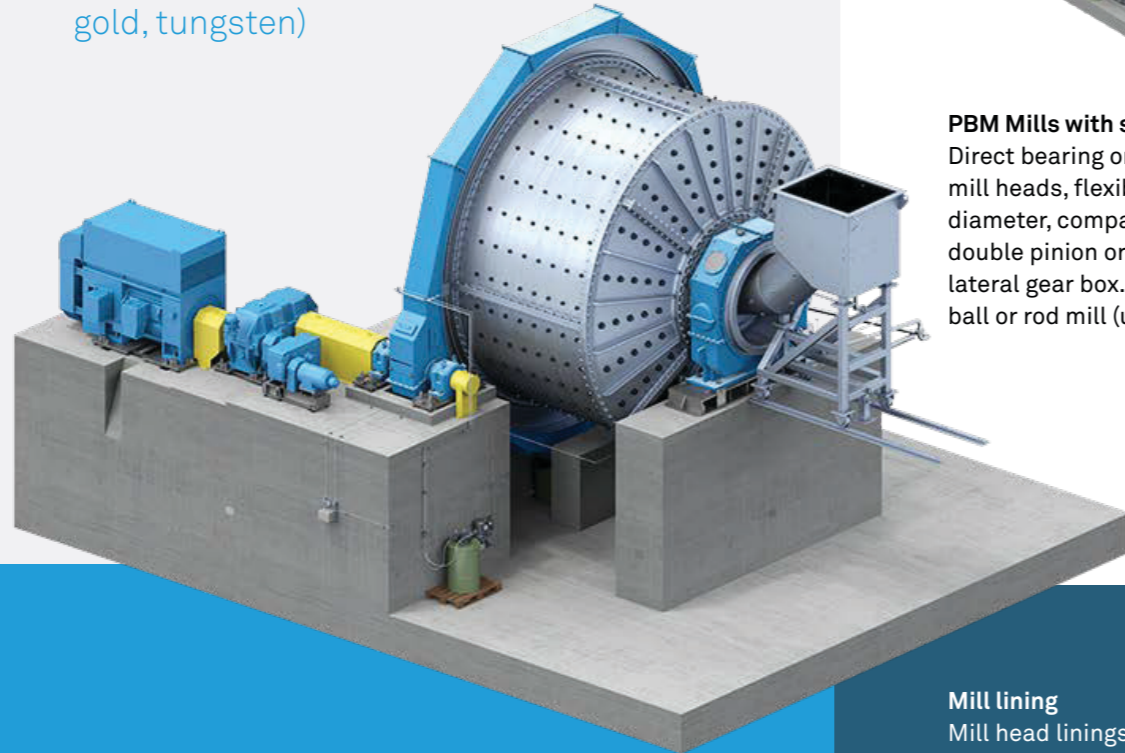
# We optimize the **mining industry**

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**.

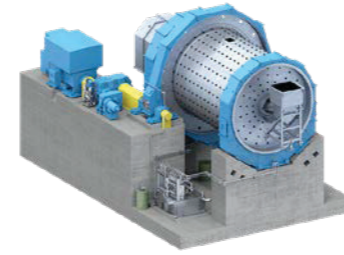
Grinding processes belong to the most energy-consuming industrial tasks of our time. As experts for efficient processes we are familiar with numerous aspects that leave plenty of space for improvement. We fine-tune all details and thus, not only deliver the best grinding results but especially plants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



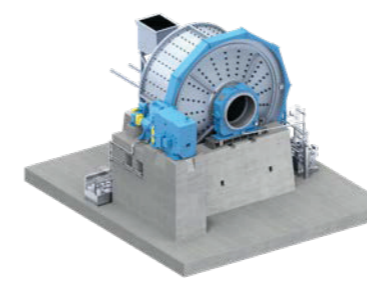
## Our mills for your demands



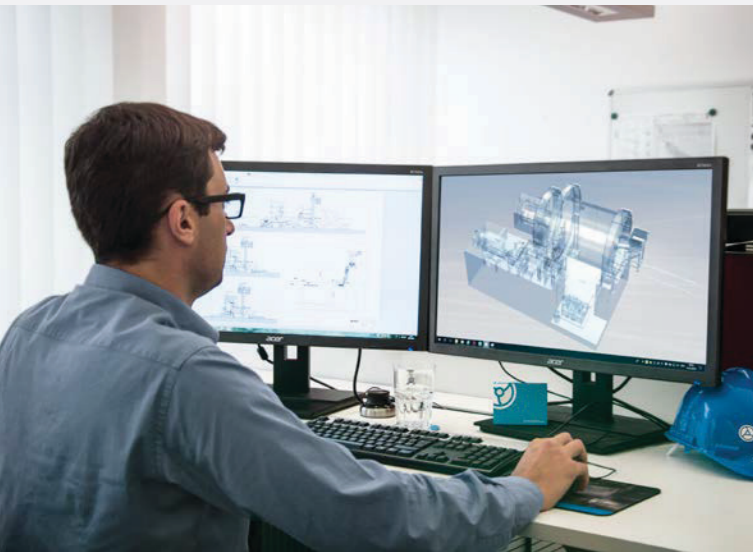
**PBM Mills with slide shoe bearings**  
Direct bearing on the mill shell, casted mill heads, flexible inlet & outlet diameter, compact drive with single/double pinion or directly flanged lateral gear box. Can be operated as ball or rod mill (up to  $\varnothing$  4.60 m).



**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).



**SAM 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.



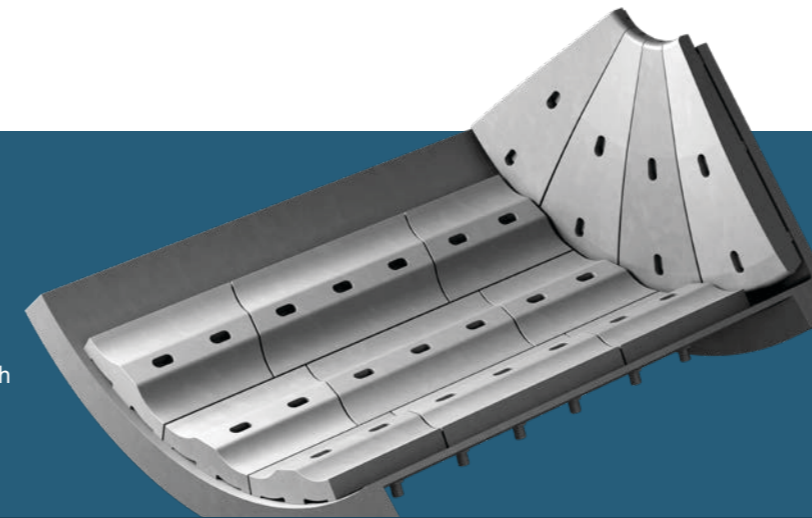
## From process analysis to tailor-made plants

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.

### 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.



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

## 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.