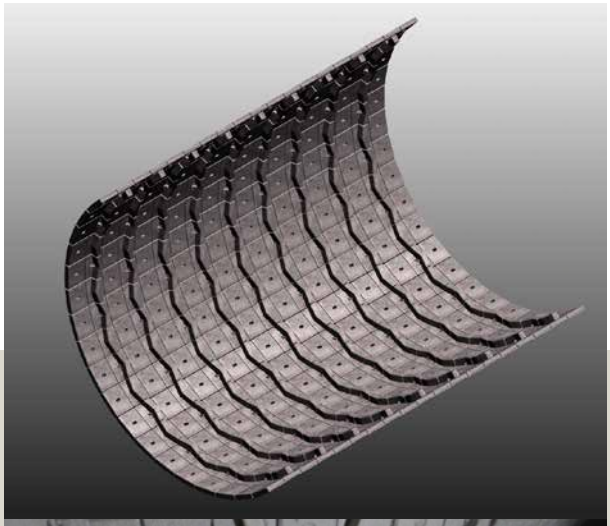
Introducing an innovative family of **lifting liners**

Designed for ball mills: cement, slag and raw material grinding



In the challenging landscape of cement production, ensuring optimal mill performance amidst wear and tear is paramount. Constant and efficient lifting in ball mills, even as wear progresses, remains a persistent challenge.

That's why we're introducing our innovative family of lifting liners **that merges enduring base plates with specifically tailored lifting rings, ensuring seamless mill operation and consistent lifting regardless of wear conditions.**

Discover unparalleled durability and enhanced operational efficiency as we redefine the grinding process for cement, slag, and raw materials. Elevate your operations with our cutting-edge lifting liners, setting a new industry benchmark.

Unlocking advantages ...

- Reduced maintenance
- Greater material utilization
- Improved productivity
- Reduced energy consumption & positive impact on CO_2 emissions
- Enhanced safety thanks to a fully bolted lining
- \+ And more

... achieved by

- Dissociation of shell protection and lifting function
- Constant lifting with wear evolution
- Retaining ring benefits

Magotteaux cement
tube mill liners

MAGOTTEAUX

Process optimization services and products for abrasive and impact applications

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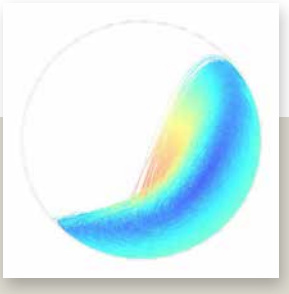
Examples of arrangements

	LINER 1		LINER 2		LINER 3	
Application	lifting liner for cement, raw, slag applications					
Max ball size (mm)	-	90	-	90	-	60
Base plate kg/m²	-	465	-	350	-	202
Lifter kg/m²	30	150	30	150	30	66
Tot weight kg/m²	495	615	380	500	232	262
Est. service life base plate		60.000	-	42.000	-	35.000
Est. service life lifter	20.000	45.000	20.000	45.000	-	35.000

* estimated, depending on mill size, currently limited to DIN drilled mills ** service life depending on material, alloy, ball charge, etc.



Various configuration possibilities tested by DEM (Discrete Element Method).

→ Achieve your desired lifting effect by adjusting design, number, and position of the lifters.

Optimizing lifting **efficiency** with controlled projection

Our innovative lateral lift design maximizes lifting effect while minimizing throwing.

With reduced impacts, the grinding process achieves superior efficiency. Additionally, this design allows for the potential utilization of a harder base plate alloy, further optimizing durability and performance.

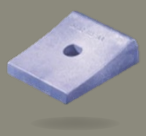
From **0 to 21°** deflector alignment

From **30 to 60 mm** base plate thickness

From **50 to 90 mm** deflectors width

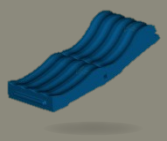
From **60 to 120 mm** deflector height

Also offering other solutions and lifting liners designs to suit your requirements in raw, cement, slag, and coal mills:



Standard liner adapted to most application

Suited to hard material for which high lifting effect is required



Performance oriented liner combining lower weight and parallel wear

Magotteaux light plate lifting liner solution

Contact our account managers and experts to find out more about how we can support you to meet and surpass your goals.

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