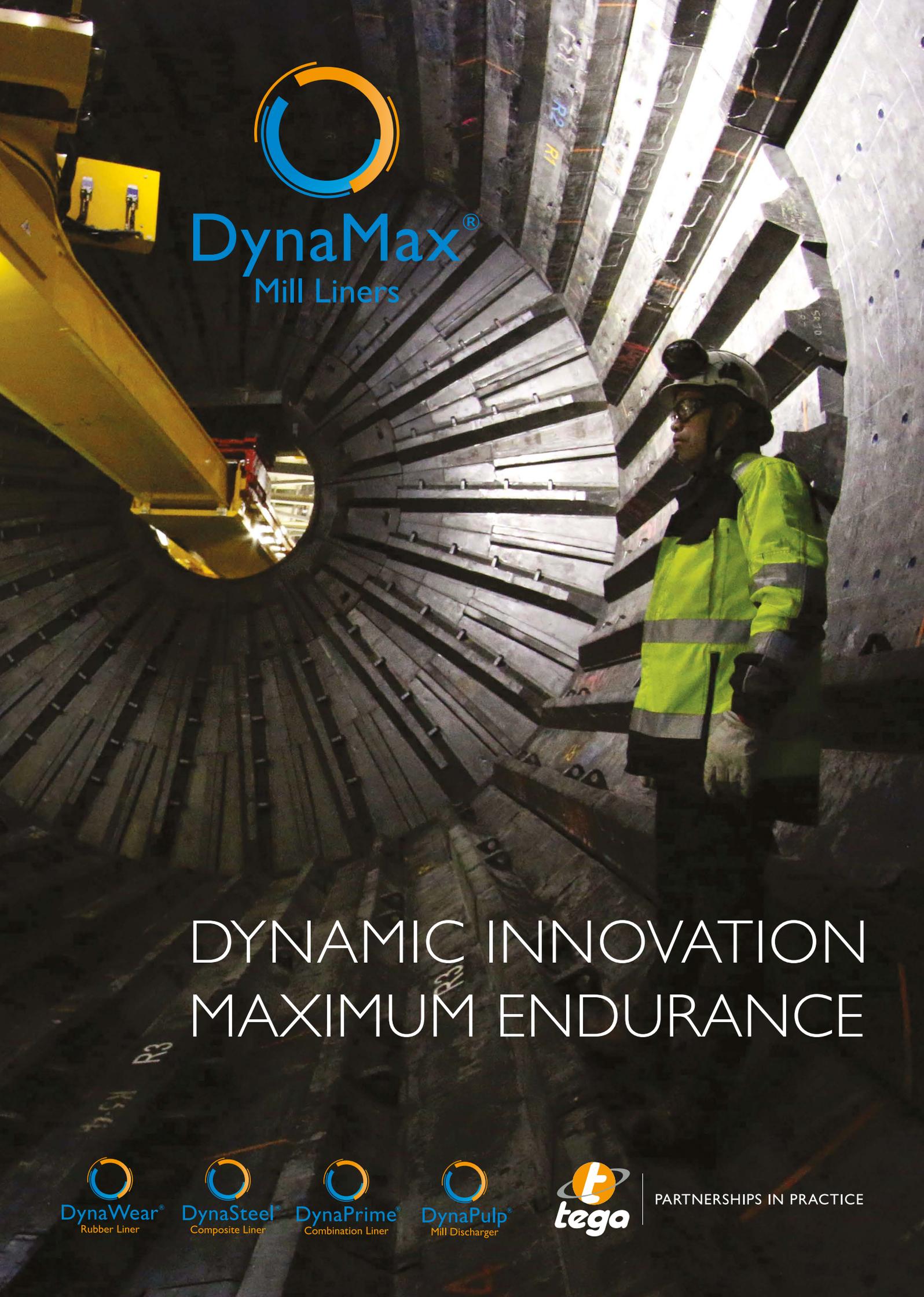


DynaMax[®]

Mill Liners



DYNAMIC INNOVATION
MAXIMUM ENDURANCE



PARTNERSHIPS IN PRACTICE

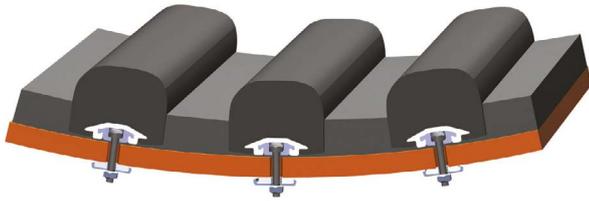
MILL LININGS

Dynamic Innovation Maximum Endurance

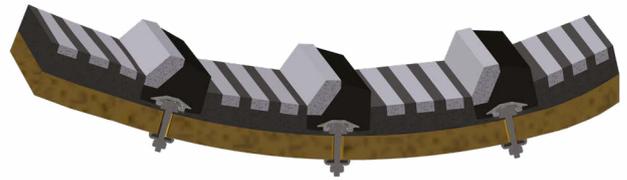
The DynaMax[®] range of mill linings are a core product range of Tega Industries who have lined more than 500 grinding mills globally in SAG, AG, Ball, Primary and Secondary milling applications. Mill liners are the flagship business of Tega with customers across 68 countries using the DynaMax[®] range of mill linings.

The Tega DynaMax[®] range comprises of an innovative product portfolio, delivering comprehensive solutions in mill lining for optimal grinding.





DynaWear®
Rubber Liner



DynaSteel®
Composite Liner



DynaPrime®
Combination Liner



DynaPulp®
Mill Discharger

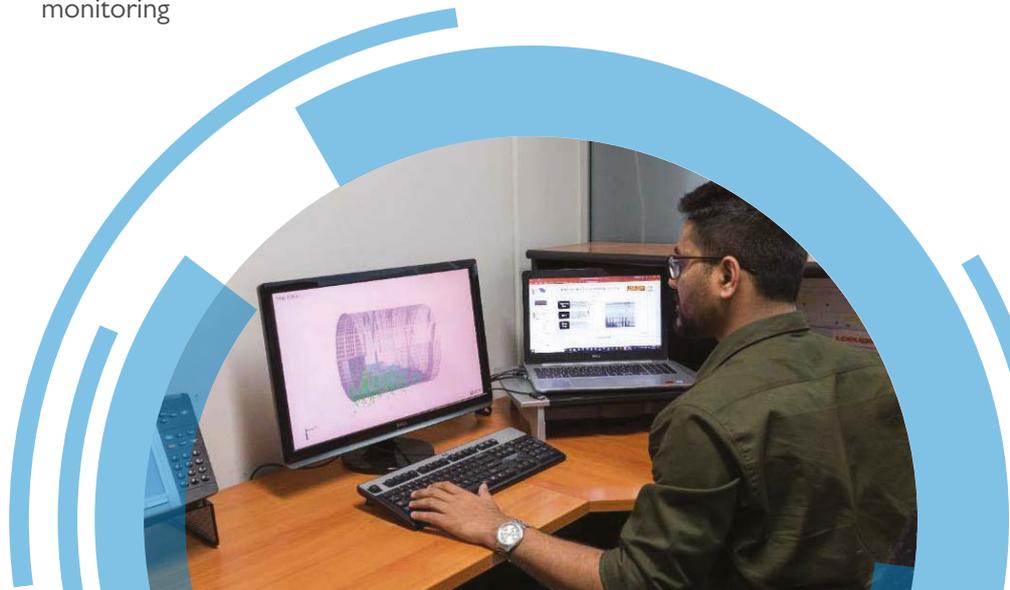
Complete Design and Fabrication

Tega provides a complete solution to its customers, from the process of identification of client needs, to the design, fabrication, quality inspection and dispatch of the product.

The DynaMax® range of mill liners are individually designed and custom manufactured to provide the optimal performance and longevity for applications which demand the highest level of service and support from design and manufacture.

Our custom design and technical service teams offer:

- Extensive capability and technical application in product design and development
- Regular site visits, audits and wear inspections to discuss performance and liner optimisation
- On-site installation support
- Complete mill lining design, manufacture and ongoing performance monitoring





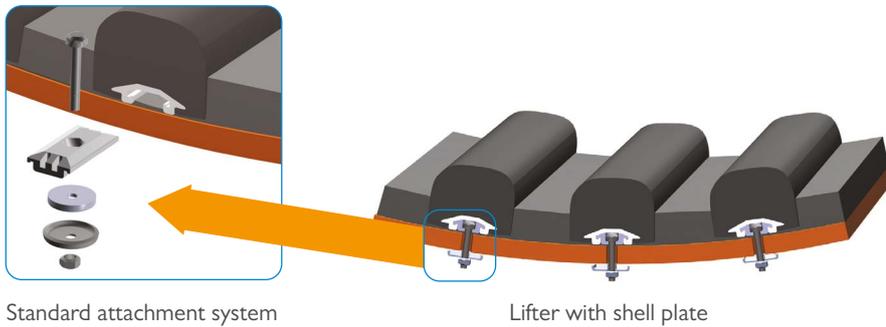
PEACE OF MIND

Rubber Mill Liner for Optimal Wear

Tega Mill Linings provide optimal grinding solutions in major mineral processing plants all over the world. The Tega DynaWear[®] rubber lining system is the preferred lining system for secondary ball mills, regrind mills and scrubbers.

DynaWear[®] rubber mill linings are individually designed for your particular working conditions and goals, with a variety of profiles and materials available for specific applications. Secondary and Regrind applications are ideal for DynaWear[®], ensuring optimised mill liner life, grinding efficiency and capacity, delivering maximum cost benefit to our clients.

DynaWear[®] is ideal for mills operating with highly acidic slurry and sets the standard of comparison for grinding performance and lining economy that has been successfully used in a wide range of primary, secondary and tertiary grinding mills, batch mills and scrubbers.



Standard attachment system

Lifter with shell plate

DynaWear® Fastening System

DynaWear® reinforced lifters have an integrated aluminium track to accommodate the fixing clamp. Non-reinforced Tega Lifter Bars are installed with detachable steel clamps which can slide inside the groove on the lifter base and are then bolted to the mill shell. The lining bolt attachment system are also available with different grades of steel for very high or low pH-values.

DynaWear® Advantages



Superior compounds
Longer liner life/less liner cost per tonne



Reduced installation time compared to steel
Increased mill availability



Reduction in noise levels
Reduced overall noise pollution



Leak proof fastening system
Better protection of mill against corrosion & washing



Less liner weight compared to steel
Longer life of rotating parts. Liner is safer to handle and install



Scheduled Tega liner monitoring program
Prediction of liner life and change out dates



APPLICATION AREAS

- AG Mills
- Ball Mills
- Scrubbers
- Batch Mills
- Lime Slaker Mills
- Mixing Drums
- Slag Mills
- Pebble Mills
- FGD Mills
- Regrind Mills
- Continuous Mills



EXTENDED LINER LIFE

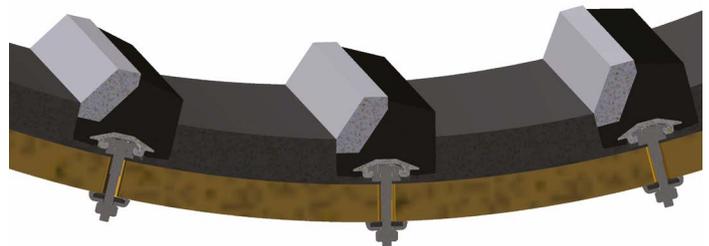




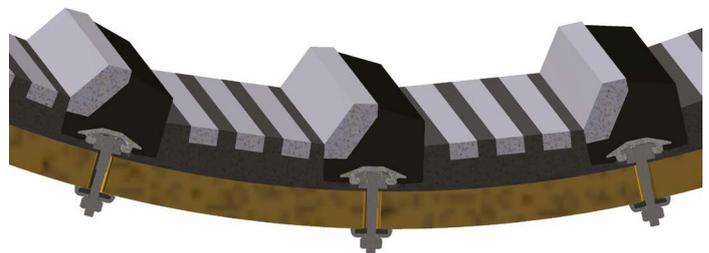
DynaSteel® Composite Mill Liners

DynaSteel® is tailor-made for each mill in question, to provide a maximum protection against wear, prolonging the mill operation time.

- DynaSteel® uses different alloys and rubber compounds to engineer a perfect blend for aggressive grinding application.
- DynaSteel® ensures complete protection from excessive wear on the mill lining and delivers maximum grinding efficiency. The lifter face angle remains constant throughout the life of the lining.
- DynaSteel® has proven to be successful in demanding applications, especially in primary grinding mills. The challenges faced by conventional steel liners such as cracking, are eliminated by the use of optimal materials for liner construction.
- DynaSteel® can be installed in larger mills where modern liner handlers are not available.



DynaSteel® Lifter



DynaSteel® Lifter on a DynaWear® Plate

DynaSteel® Advantages



Composite liner design
Longer life/less liner cost per tonne



Various steel grades & thicknesses
To achieve a uniform wear life throughout the mill



Less weight on rotating parts
Longer life of rotating parts

APPLICATION AREAS

- AG Mills
- SAG Mills
- Primary and Secondary Ball Mills
- Rod Mill Shells
- Scrubbers

INCREASED PRODUCTIVITY





DynaPrime® Combination Liner

The Tega DynaPrime® range has been designed specifically for the larger sized mills where modern liner handlers are available. DynaPrime® has been engineered to reduce the number of individual sections that are installed inside the mill, substantially reducing the installation downtime for maximum mill availability.

The DynaPrime® design prioritises safety during installation with bolting from the outside of the mill which reduces risk during the installation of the liner.

DYNAPRIME IS IDEAL FOR HIGH ASPECT SAG MILLS UP TO 40FT PLUS IN DIAMETER

DynaPrime® Advantages



Increased Asset Productivity

- Increased mill availability
- Increased liner life
- Increased charge volume due to a reduction in liner weight



Reduced Mill Operating Expenses

- Lower overall maintenance costs
- Reduced energy consumption
- Less personnel required for installation
- Faster reline due to reduced number of components



Reduced Risk

- Mitigates risk of unplanned shutdowns
- Better liner profile stability throughout the liner life



Improved Safety

- Fixings installed from outside the mill
- Reduced number of personnel required inside the mill during installation

APPLICATION AREAS

- SAG Mills
- AG Mills
- Primary Ball Mills

MAXIMUM DISCHARGE EFFICIENCY

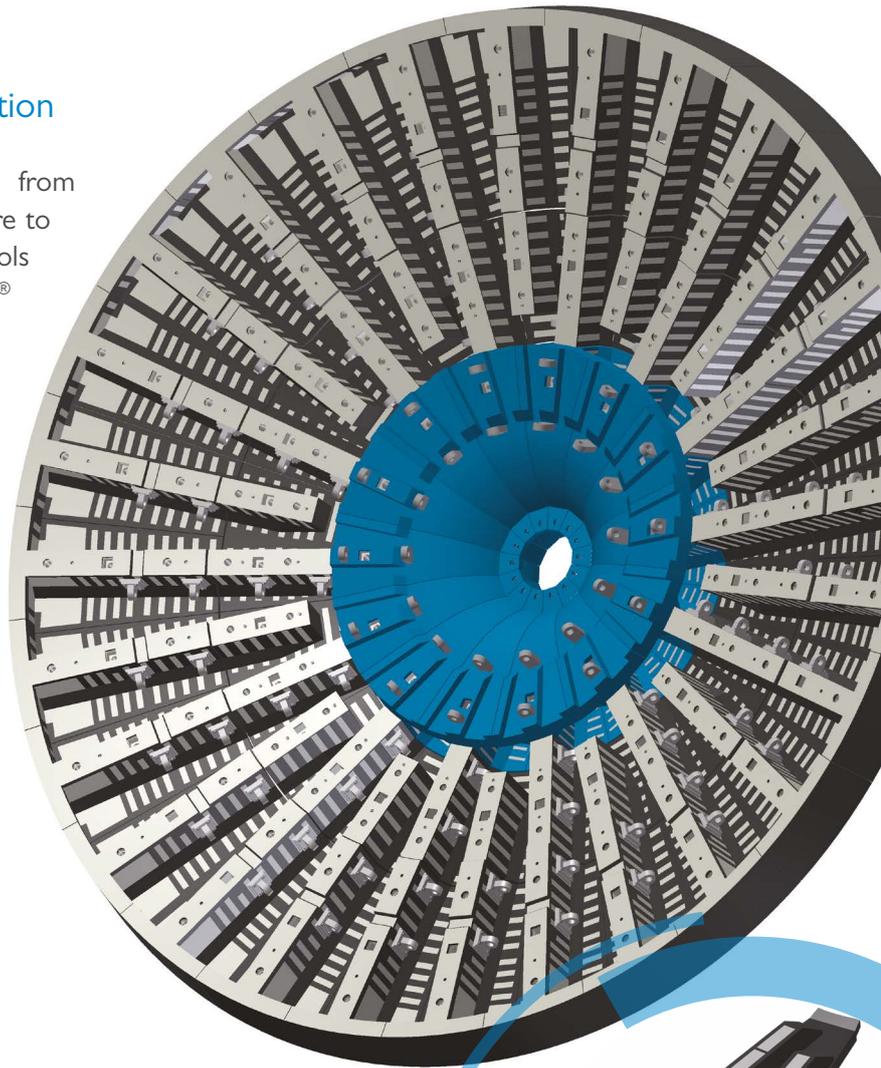


Pulp Dischargers from Maximum Production

Tega DynaPulp® guarantees maximum efficiency from the mill. Tega uses advanced computational software to simulate the slurry charge using DEM and CFD tools that ensure an efficient discharge system. DynaPulp® offers Curved and Radial Discharger systems to achieve a lower specific power consumption and an effective energy saving.

The DynaPulp® discharger system ensures a maximum discharge efficiency, eliminating carry-back, increasing the mill capacity. No carry-back also eliminates excessive wear at the trailing edge of the discharger system.

The DynaPulp® radial discharger system is engineered for both uni-directional and bi-directional mill rotation. Based on simulations and experiments, DynaPulp® can be designed with exotic wear materials at optimal positions to arrest excessive differential wear rate.



DynaPulp® Advantages



Optimized Flow

- Maximized Capacity
- Zero carry-back resulting in higher utilisation of discharger bucket capacity



Energy Efficiency

- Lighter weight of the discharger system
- Lesser specific power consumption compared to conventional discharger systems



Increased Life

- Exotic wear materials at the high wear zones eliminate premature failure
- Minimal carry-back considerably reduces the wear on the trailing edge



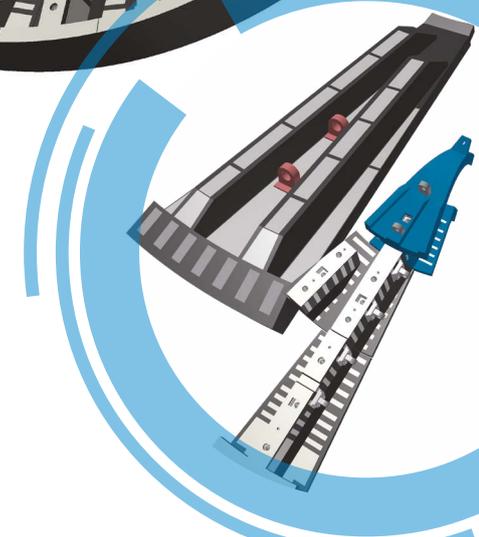
Ease of Fitment

- Every discharger is tested for perfect fitment
- Lighter weight



Improved Safety

- Increased safety while installing and dismantling the discharger system



APPLICATION AREAS

- SAG Mills
- AG Mills
- Grate Discharge Ball Mills

The background image shows the interior of a large industrial mill. Several workers in high-visibility yellow and orange safety gear are visible. One worker is on a ladder, and others are near a large yellow mechanical arm or conveyor system. The mill's interior is metallic and features a grid of circular holes. The lighting is bright, highlighting the industrial environment.

DynaMax®

MILL LINER COMPARISON

The DynaMax® range of wear liners offer a range of wear durability for all mill grinding applications. Starting with DynaWear®, the range moves through increased durability and lifetime to the steel embedded DynaSteel® liner and then on to DynaPrime® for the toughest of mill grinding requirements. The table below show the variable liner attributes and applications of each of the DynaMax® mill liners.





MILL LINER ATTRIBUTES			
Superior compounds	✓	✓	✓
Less downtime during installation	✓	✓	✓
Reduction in noise levels	✓	✓	✓
Leak proof fastening	✓	✓	✓
Weight	✓	✓ ✓	✓ ✓ ✓
Liner life	✓	✓ ✓	✓ ✓ ✓
Steel composite liner		✓	✓
Energy consumption reduction	✓	✓ ✓	✓ ✓ ✓
Grinding durability	✓	✓ ✓	✓ ✓ ✓
MILL APPLICATIONS			
SAG & AG Mills	✓	✓	✓
Primary Ball Mills	✓	✓	✓
Secondary Ball Mills	✓	✓	
Tertiary Ball Mills	✓		
Regrind Mills	✓		
Rod Mills	✓	✓	
Batch Mills	✓		
Continuous Mills	✓		
Scrubbers	✓		
Lime Slaker Mills	✓		
Pebble Mills	✓		

Note: Multiple ticks indicate increase in relevant attribute.



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 DynaMax[®]
Mill Liners

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PARTNERSHIPS IN PRACTICE

www.tegaindustries.com

