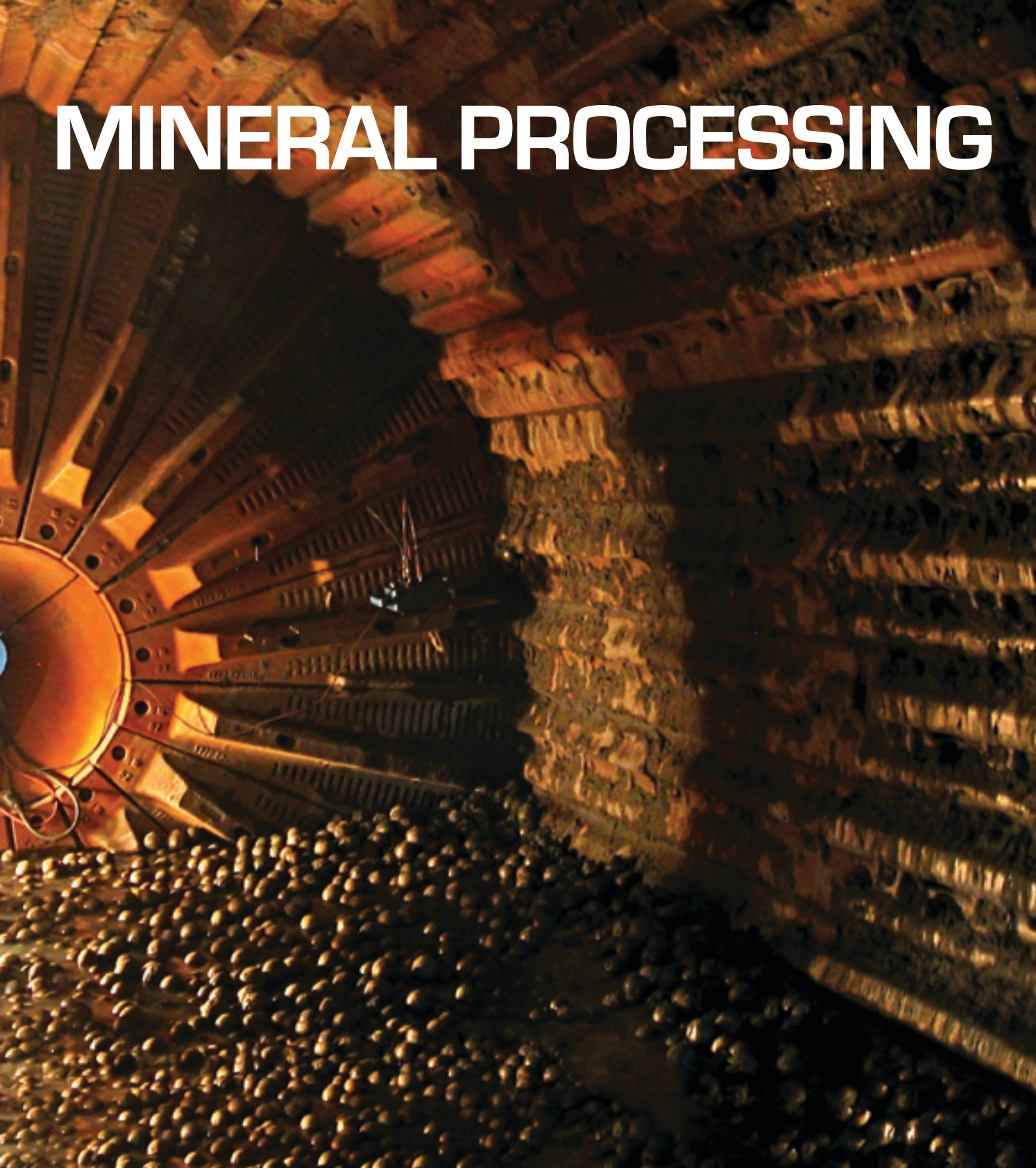


MINERAL PROCESSING



Our Innovation. Your Advantage.



Bradken

Bradken's Mineral Processing Division is a market leader in the design, manufacture and supply of differentiated high quality mill, crusher and conveying products and services for the mining and quarrying industries.

Our business focuses on providing customers with innovative, cost effective complete wear liner solutions for mills and crushers, designed to increase performance and reduce operating costs in their grinding and crushing operations.

Capabilities

With foundries dedicated to the manufacture of mineral processing products and ready access to Bradken's global manufacturing network, the business has assembled a highly skilled team with technical expertise in an extensive range of process applications including:

- World class manufacture
- Product design
- Analysis and testing
- Process technology
- Material selection and development
- Inventory management
- Standard and custom part supply
- Technical support and service

Technical Expertise

Bradken regional sales representatives and product development personnel are available to analyse your product requirements and ensure that you receive parts specifically designed and manufactured for your operational requirements, with services including:

- Liner optimisation studies, including Discrete Element Modelling (DEM) and 3D scanning
- Design analysis
- Liner wear monitoring and reporting
- High performance materials
- Leading edge process technology and design
- Technical support and service

Quality Design and Technology

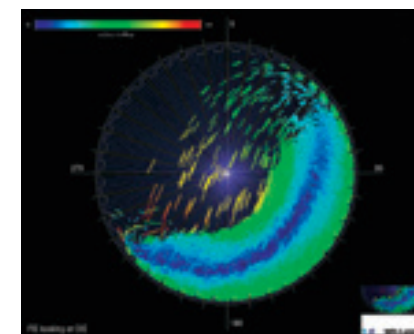
Bradken has achieved international recognition for its integration of process technology and product application knowledge into the design process, which combines with advanced product manufacturing systems and focused technical support to ensure customer satisfaction and superior production efficiencies.

Bradken's global manufacturing capability ensures security of supply and our fully integrated design and manufacturing process incorporates:

Design, Process and Casting Analysis

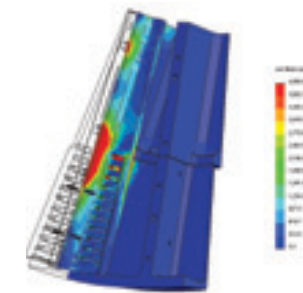
PROCESS

- Charge trajectory simulation is a tool used to coordinate and integrate liner design with mill operation
- Simulations are run to ensure optimum charge trajectories are attained
- Simulations are provided to our customers at no additional cost



DESIGN

- Extensive grinding knowledge
- Customized designs for individual operations
- Designed in 3D and run through a variety of simulation tools



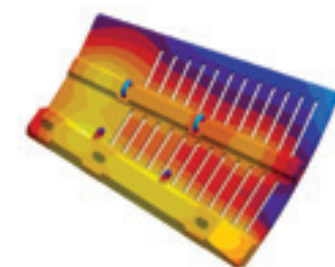
OPTIMISATION

- Accurate analysis of liner wear throughout the entire mill
- Comparison to previous campaigns and/or unworn geometry
- Evolving designs to reflect evolving mill operation and process objectives



VALIDATION

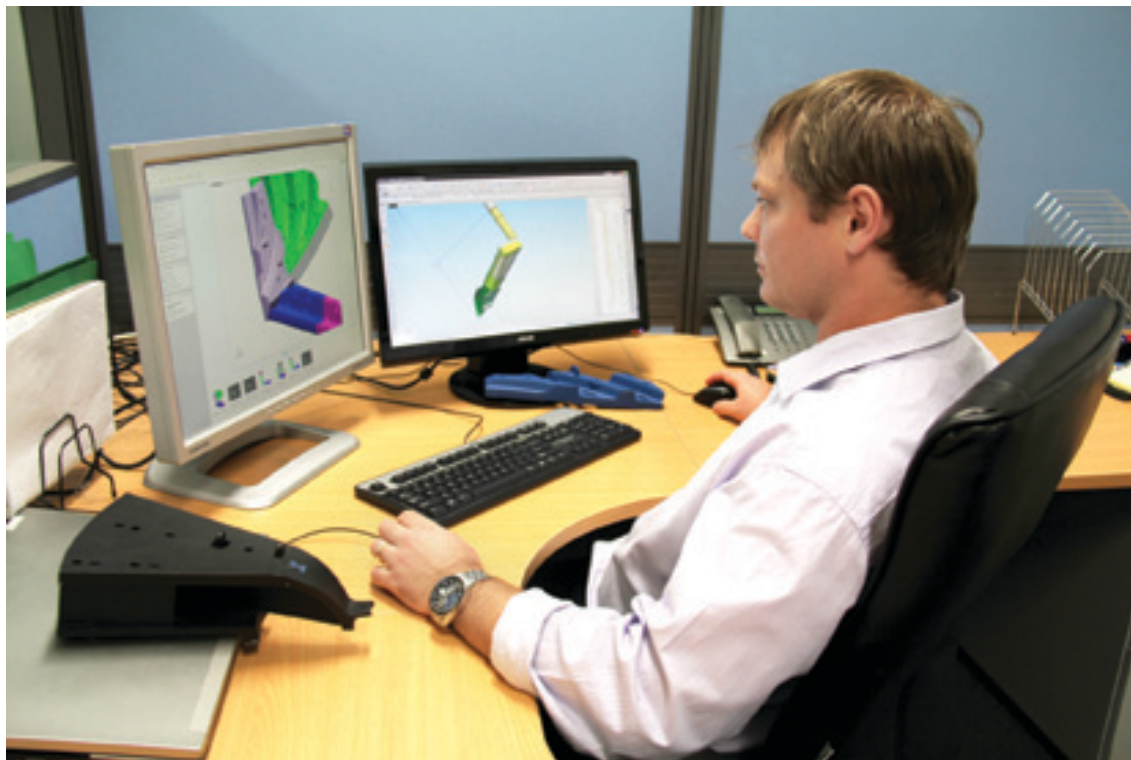
- MAGMASOFT® casting solidification simulation for optimisation of key production factors
- CAD models used from design through to process validation and CNC pattern fabrication



Support Services

Our specialist engineering and technology skills mean we are able to offer a total package incorporating:

- Dedicated Regional Representation
- Analysis of Design
- Technical Inspections
- Shutdown Attendance and Support
- Wear Monitoring Services
- Responsive Manufacturing
- Technical Support and Service



Superior Quality

As an ISO 9001 approved designer and manufacturer, our aim is to help your business increase efficiency and profitability by providing high quality, technically superior engineered products and technical support services.

Bradken offers:

- Security of supply through an extensive network of global manufacturing facilities
- Regional service and support
- Technological innovation
- Supply to suit customers' needs
- World leading manufacturing technologies

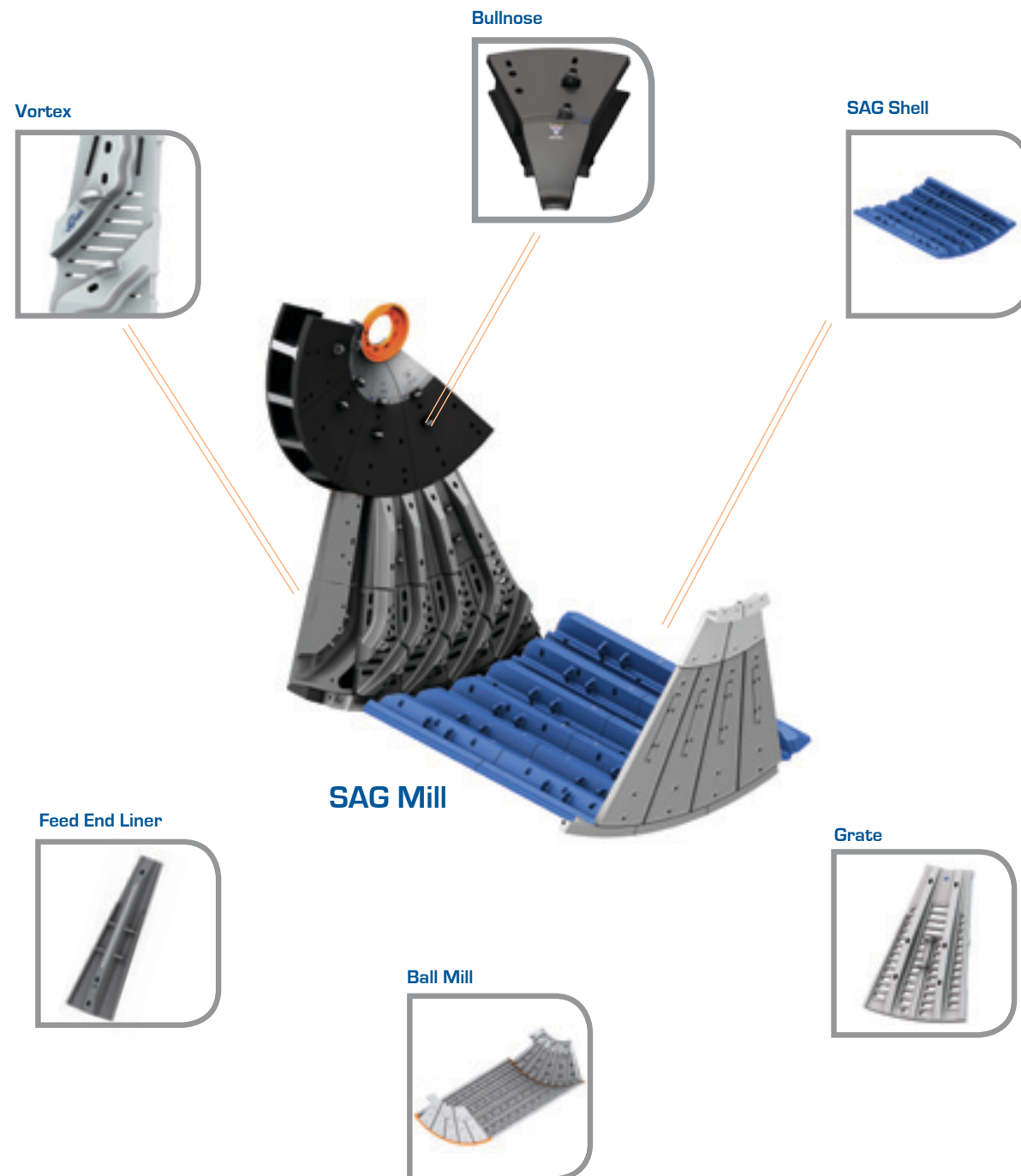


Mill Liners

Bradken is a leading supplier of high quality Mill Liner Systems to suit AG/SAG, Ball and Rod Mills. By utilising the latest technologies, Bradken aims to provide customers with an advanced Mill Liner System that will increase mill performance and availability while at the same time, lower maintenance costs.

Bradken Mill Liner Features

The optimised Liner design of Bradken's range of Liner Systems offers the advantages of reducing the number of parts, fewer relines, quicker change out and assembly, and safer handling. This results in reduced maintenance costs and increased productivity.



PERFORMANCE STRENGTH BALL MILLS VORTEX EXTEND WEAR LIFE QUALITY DISCHARGE CONES MILL LINERS BULLNOSE



Vortex™ Discharge End has been developed to encourage early discharge of coarse product that travels down the pulp lifters during each revolution of the mill. Modelling shows the Bradken **Vortex** improves product movement and decreases the time to exit the discharge cone, reducing pulp lifter wear.



Bradken **Bullnose®** discharge cones are manufactured from superior wear materials to extend wear life of the liners and maximise mill availability. Each discharge cone design is tailor-made to ensure safe handling, ease of installation and maximum performance. The **Bullnose** discharge cone is designed with a Key system to ensure the last discharge cone installed fits with ease and requires no mating parts to be removed.



Crushing and Conveying

Bradken is synonymous with world class quality and service to the mining and quarrying industries, with Bradken products being designed and manufactured to meet the increasingly demanding harshness of these industries.

Crusher Liners

The optimised design of Bradken Crusher Liners for Gyratory, Cone and Jaw Crushers ensures an uncompromising, reliable system for maximum performance and longer wear life. Bradken Crusher Liners have been engineered with increased durability and strength to provide Bradken's global customers with a higher productivity.

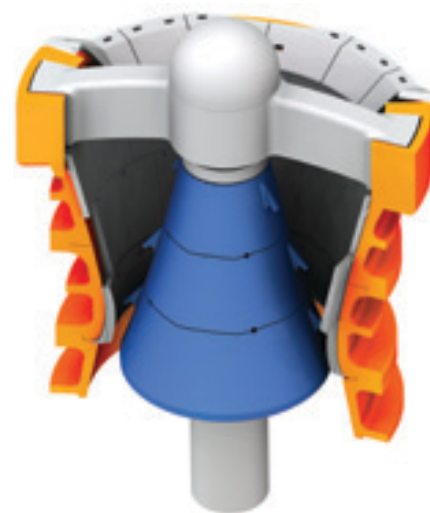
Gyratory Crusher Concaves



Cone Crusher

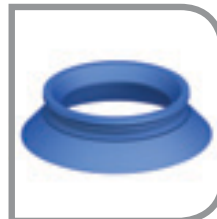


Jaw Crusher



Crusher

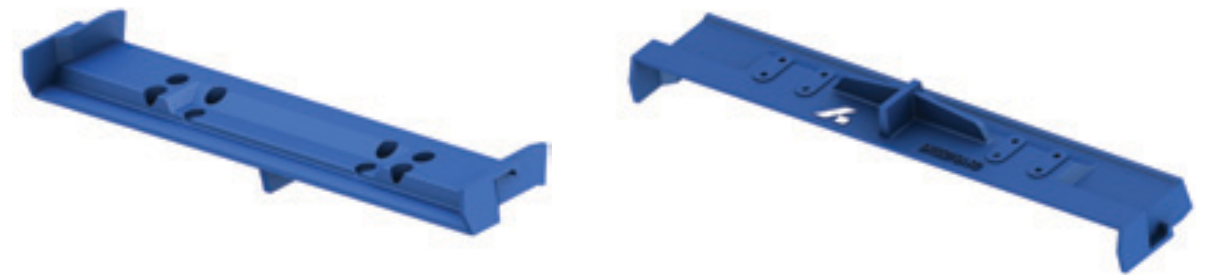
Cone Crusher Bowl Liner



Apron Feeder Components

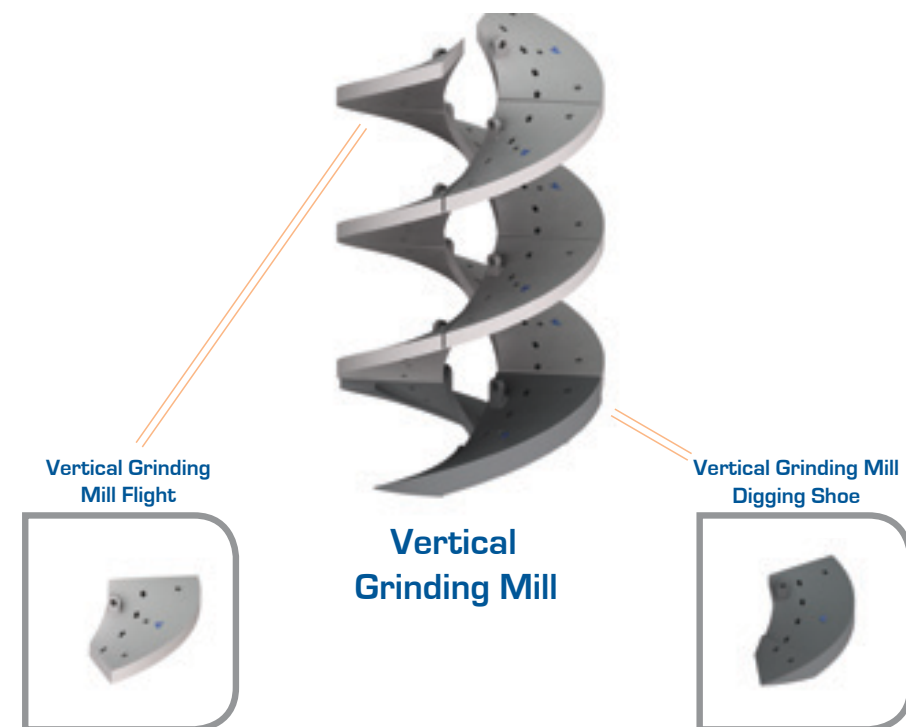
Through the use of advanced technology and material optimization Bradken is able to supply longer lasting, high quality apron feeder parts. Replacing fabricated pans with cast pans can increase the overall performance and service life of the pans.

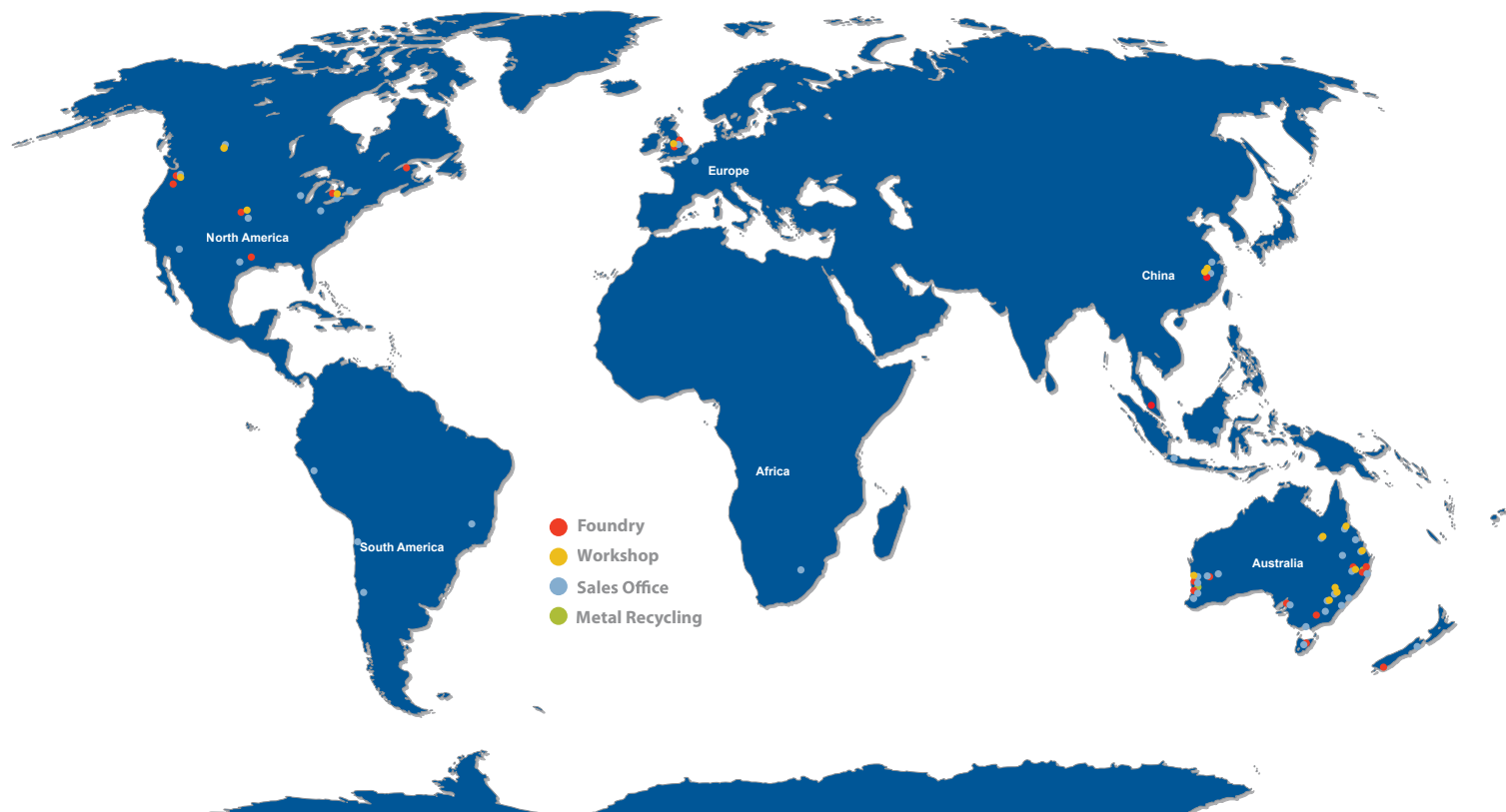
To maintain quality of the parts, each pan is press straightened and gauged prior to shipment. Available sizes range from 1 metre to 4 metres in length. Bradken pans have been proven under extreme working conditions below -20 degree Celsius.



Other Products available include:

- Engineered spares for Grinding Mills
- Fasteners for Mill Liners
- Vertical Grinding Mill Liners
- Engineered spares for Crushers
- Chute Liners





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