



# **Wear Resistant Components**

*Power Generation and Cement Industries*

**Our Innovation. Your Advantage.**



# Products And Technical Support

***Bradken® is a leading supplier of differentiated consumable products to the resources, power generation, cement and freight rail industries. [Visit our website](#)***

Employing more than 3,000 people in key international locations. Bradken's product range includes consumable parts, capital equipment and associated maintenance refurbishment services.

The company services its markets through strategic divisions: - Power and Cement, Mining, Mineral Processing, Rail and Industrial. These divisions are supported by a network of manufacturing facilities across Australia, China, India, Malaysia, Canada and Peru.

At Bradken, we recognize that safety, the environment and quality are of critical importance. Bradken's Management Systems are based on International Quality System Standard 9001 (2000) and International Environmental Standard ISO 14001.

Bradken is a world leader in the supply of wear components used in the power generation industry and has been involved in the supply of parts for over 50 years.

Bradken is committed to reducing its environmental impact through a targeted sustainability strategy that drives decarbonisation, advances circularity, builds responsible value chains, and addresses modern slavery through ethical and transparent practices.

Our circularity program drives circularity by extending product life, reducing waste, and enabling resource recovery—creating long-term value for customers and the environment.

## Products

Bradken manufactures a wide range of wear resistant components for the Power Generation Industry.

Including but not limited to Horizontal and Vertical Milling Operations:

- Grinding Balls and Rings
- Mill Tables/Spiders/Throat Rings
- Roller Table Segments
- Roller Tyres
- Yokes
- Mill/Housing Liners
- Thrust Rings
- Ventilator Mill Blades and Liners
- Beater Wheel Mill Components
- Duaplate
- Burner Nozzles/Rod Protectors
- Flame Stabilising Rings/Ceramics



# Product Development

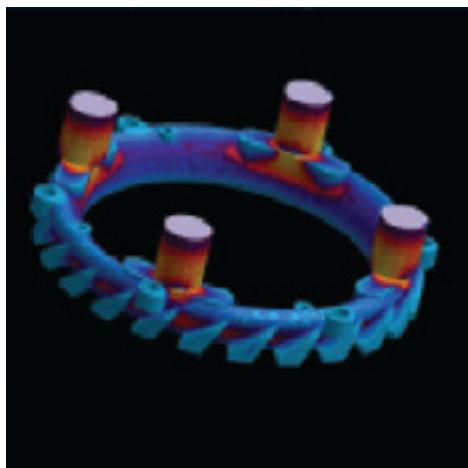
*Bradken's Product Development Team of Engineers and Metallurgists have assisted customers with a range of technical issues from extending wear life to improving safety practices and operational efficiencies.*

## Design, Manufacture and Test Facilities

Bradken's global manufacturing facilities have invested heavily in manufacturing technology and training to support the demanding levels of quality, performance and reliability needed in our products.

Facilities include:

- Design office, 3D modelling and casting simulation software.
- Capability to manufacture large castings up to 25Mt.
- Specialist induction melting furnaces.
- State of the art heat treatment ovens.
- Testing and analysis including: spectrographic, NDT, hardness, magnetic particle, ultrasonic, dimensional and visual checks.



# Lifting And Handling Of Rings

## *Installation and removal of bottom rings.*

Through extensive Finite Element Analysis (FEA) and engineering development, Bradken can offer improved lifting features included in the bottom ring to assist with ring removal when accessibility is limited. The improved lifting process utilises integral lifting inserts that include an M30 machined thread that is capable of housing a number of lifting devices.

The suggested lifting device is the RUD - VLBG-PLUS Load ring with a Nominal WLL of 6,700 kg each, three of which are spaced evenly apart across the top of the bottom grinding rings as displayed in Figure 2.

At Bradken, safety in design of all our products is a key consideration during any improvement activities, therefore before offering this option Bradken undertook extensive testing to ensure that the component was capable of being utilised safely. The results showed that Bradken's design with the M30 RUD - VLBG-PLUS Load Ring was capable of lifting >26T (greater than three times the requirement) with no yielding noted in the casting.



Figure 2. Bottom Grinding Ring including lifting inserts.



Figure 3. M30 RUD - VLBG-PLUS Load Ring

# Wear Life Pulverising Components

*Bradken's many years of knowledge and expertise can assist in maximising the wear life of grinding components.*

## Bradken's Expertise - Wear Life

There are many factors which can affect wear life of grinding components.

Coal parameters include HGI, ash content, moisture, particle size and YGP index, Quartz, Silica and Pyrite content. Grinding mill parameters include operating temperatures, rotation speed, feed rates and maintenance practices that vary greatly at each power station affecting grinding component life.

### **Success Story - Japanese Power Station 10E Mill**

Wear rates of Bradken Grinding Balls in this optimum performing 10E Mill utilizing premium grade Anthracite Coal Blends achieve consistent wear life up to 60,000 operational hours.

### **Success Story - Australian Power Station 10E Mill**

Wear rates of Bradken Grinding Balls in this 10E Mill utilizing premium grade Coal Blends achieve consistent wear life up to 50,000 operational hours.



# Quality And Environmental

*As an ISO 9001 accredited manufacturer, our mission is to help your company increase profitability by providing high quality, technically superior engineered products and support services.*



Bradken provides full traceability, from cast-on identification through internal or third party certification to manufacturing records, forming a key element of the technical support provided for all products throughout their service life.

As a leading supplier Bradken is committed to quality and service through the continuous improvement of both its manufacturing techniques and the expertise of its workforce.

Bradken recognizes the importance of Environmental Protection, Health and Safety with all of our sites Certified and Registered under the INTERTEK SAI Global Registration ISO 9001:2015.

## Bradken offers High Quality

Wear resistant components for the coal fired power and cement industries. Product development services that deliver cost effective solutions to wear life and other performance issues supported by world class manufacturing and testing facilities.

## Bradken holds the following relevant ISO certifications

For quality, environmental, safety and energy management system standards:

Foundry Location	Certifications Held	Engineering and Fabrication Location	Certifications Held
Coimbatore (India)	9001:2015, 14001:2015, 45001:2018, 50001:2011	Bassendean (Australia)	9001:2015, 14001:2015
Merlimau (Malaysia)	9001:2015	Edmonton (Canada)	9001:2015
Mont Joli (Canada)	9001:2015	Ipswich (Australia)	9001:2015
Xuzhou (China)	9001:2015, 14001:2015, 50001:2018	Innisfail (Australia)	9001:2015
Wodonga (Australia)	9001:2015, 14001:2015	Mt Thorley (Australia)	9001:2015
Wundowie (Australia)	9001:2015, 14001:2015	Xuzhou (China)	9001:2015, 14001:2015, 50001:2018

### Note:

ISO9001:2015 – Quality Management Systems.

ISO14001:2015 – Environmental Management Systems.

ISO45001:2018 – Occupational Health and Safety Management Systems.

ISO50001:2011 – Energy Management Systems.



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globally to find a solution  
for your business.**



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Wear Resistant Components Brochure-REV1-January 2026-English. BRADKEN® 2026  
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