

CRAWLER SYSTEMS



Our Innovation. Your Advantage.



World Leader in Crawler System Design and Manufacture

Bradken is a world leader in Crawler System design and manufacture for mining shovels and excavators. Our reputation for high quality, dependable products has been proven over decades supplying to mining markets around the world. Today, Bradken is the undercarriage component supplier of choice for the majority of original equipment manufacturers.

Bradken provides a full range of components for the undercarriage of mining equipment, including:

- Crawler shoes
- Pins & Bushes
- Sprockets
- Idlers
- Load rollers
- Return rollers

Bradken incorporates significant design enhancements into its range of undercarriage components. These features help to overcome the rigors of climate and geology encountered in mining operations around the world.

Our products range from DRP (Direct Replacement Parts); to the Opti-Trak® product range exhibiting higher strength and durability; to the Evolution® shoe range with the patented continuous roller path which extends the life of the undercarriage. Bradken's global network of regional sales offices can also provide a wear monitoring service to enhance component performance and aid in maintenance planning.

By focusing on our customer's undercarriage requirements we are able to offer effective, site-specific solutions, employing superior components that provide consistent service with minimal maintenance. Reliability in component life increases mine productivity and ultimately profitability.

Bradken offers an extensive range of undercarriage components, direct to mining customers around the world.



BRADKEN IS THE SUPPLIER OF CHOICE FOR THE MAJORITY OF ORIGINAL EQUIPMENT MANUFACTURERS.

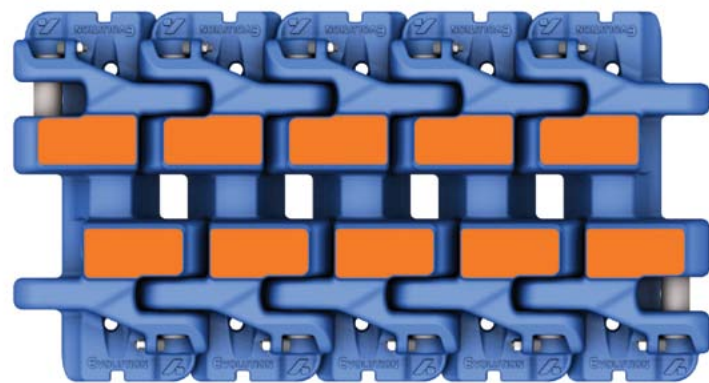


EVOLUTION

The Evolution® range of quenched and tempered crawler shoes was developed by Bradken to overcome the shortfalls in some traditional designs.

Evolution crawler shoes are manufactured from induction hardened NiCrMo cast steel. The base metal enables the crawler shoes to handle high impact loads whilst the surface hardening provides excellent wear resistance in critical wear areas.

The Evolution design incorporates the use of Bradken's patented 'continuous roller path'. This design enhancement improves the contact pressure distribution between the roller and the shoe. As a result, the roller is supported at all times, reducing metal flow in the shoe and increasing the service life of mating components.



The connecting pins are manufactured from induction hardened NiCrMo steel and are retained by a simplified nut and bolt system which allows for ease of installation, removal and maintenance. There is no longer a requirement to use retaining plates and circlips as utilised in some other designs.

The grouser wing tip has been redesigned and strengthened to provide greater durability and support in uneven pit conditions.

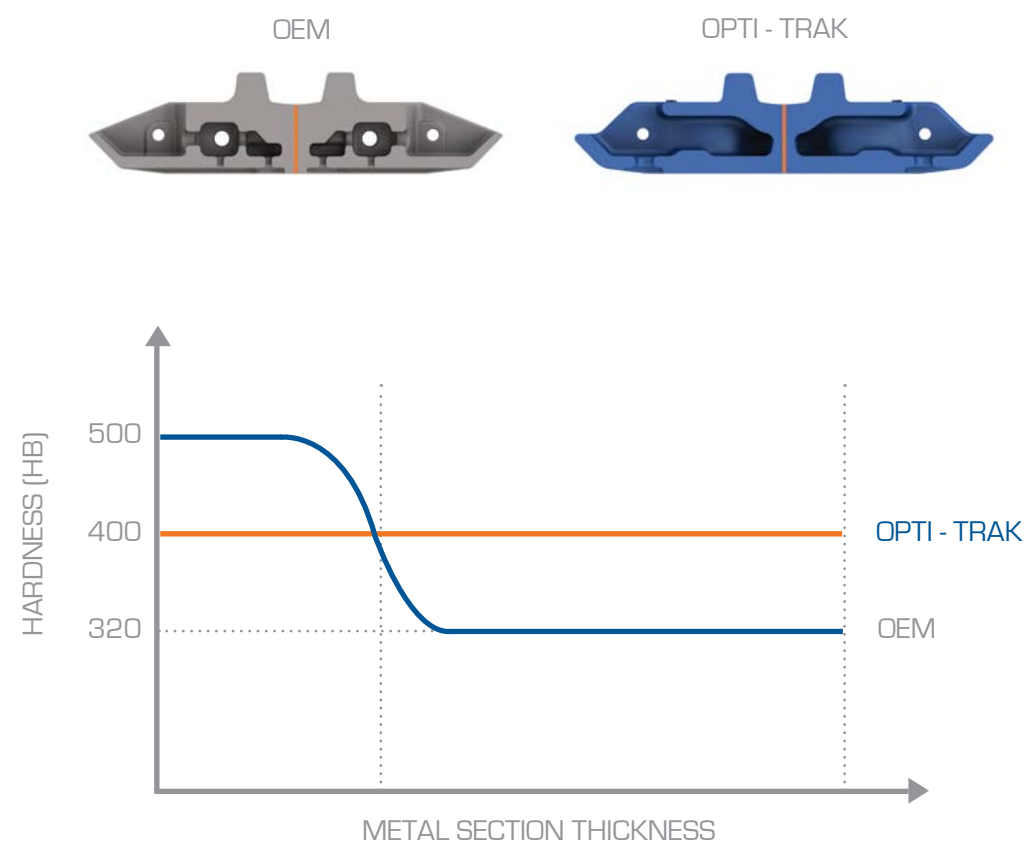


OPTI-TRAK

The Opti-Trak® range of crawler shoes developed by Bradken offers significant advantages over the traditional shoe design.

Traditional shoes are case hardened on the surface, but are softer underneath meaning wear rates increase over time.

Bradken's Opti-Trak shoes are through hardened to give excellent wear resistance and uniform wear rates all the way through the metal section.



The roller path area is supported by Bradken's patented 'Pillar of Strength' to prevent crushing of the worn shoe in hard pits. Other areas of high wear and those subjected to significant impact strikes have been strengthened to provide greater structural integrity.

The connecting pins are manufactured in-house from high quality, induction hardened 4340 grade steel. This material ensures a greater service life than the more commonly used 4140 grade steel.

The Opti-Trak range of Crawler Shoes and undercarriage components are interchangeable with the existing OEM components.

Sprockets, Idlers & Rollers

Bradken offers an extensive range of other undercarriage components such as sprockets, idlers, load and return rollers.



Sprockets



Idlers



Rollers

The sprockets and idlers are superior grade, high quality, induction hardened castings that provide increased impact and wear characteristics. The case hardened wear surfaces ensure that the hardness levels are matched to the mating components, whilst retaining a ductile core that is able to absorb impact.

The CNC machined surfaces and the use of superior quality components ensure that the replacement parts consistently fit and are of optimum quality.

The Bradken designed and manufactured range of load and return rollers have been developed for optimal wear in all conditions and offer a range of features to ensure maximum wear life and eliminate downtime.

Bradken manufactured rollers have a forged one-piece CrMo steel roller shell. The incorporation of high quality, spun cast manganese bronze bushes and NiCrMo grade axles, offer superior wear and impact resistance. Component life expectancy is enhanced with the use of induction hardened wear surfaces.

Pins & Bushes

Precision machined by the world's largest manufacturer of mining class crawler shoes, the Bradken range of crawler shoe pins provide a tough and effective solution to the harsh operating environments experienced in the mining industry.

The quench and tempered alloy steel utilized is a tougher alloy. This results in reduced incidences of pin breakages. Each pin is individually induction hardened as part of the manufacturing process. The hardened outer case and tough ductile core reduces pin wear whilst maintaining optimum core strength. The fully automated, quality assured production process ensures greater consistency and reliability of components.

THE HIGH DURABILITY PINS RESULT
IN REDUCED MACHINE DOWNTIME
AND INCREASED PRODUCTIVITY



Product Development

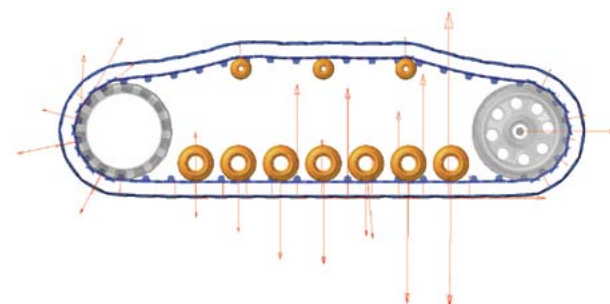
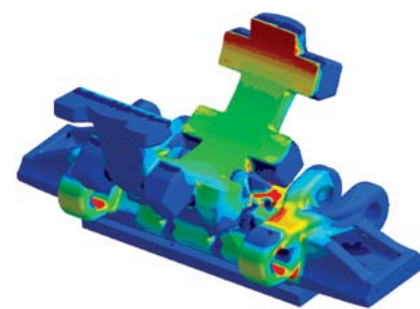
Bradken's reputation for producing high quality and innovative products results from understanding our customer's operating conditions, a willingness to customise and a long-standing track record of providing superior performance products.



Bradken's product development team is dedicated to reducing our customer operating costs and increasing equipment efficiency. Our top priority is customer support and after sales service. The focus is to deliver greater user satisfaction through products that bring greater value and people who provide on-site technical collaboration and support.

Bradken embraces new technologies that help us produce world-class products. Our design, analysis and manufacturing capabilities feature:

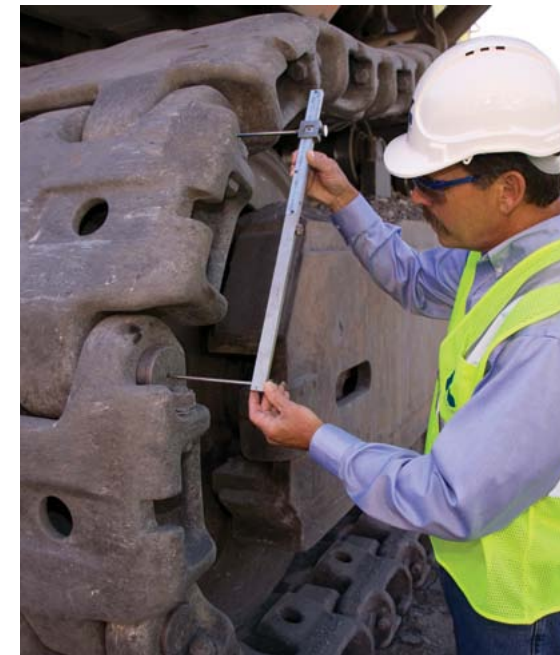
- Computer-aided engineering, design and manufacture
- FEA – Finite Element Analysis
- Dynamic motion analysis and contact force analysis
- Virtual prototyping
- Solidification simulation
- Concurrent engineering
- Rapid prototyping
- Fatigue testing
- CMM dimensional verification
- On-site prototype testing



WHEN YOU TALK TO BRADKEN, YOU'RE TALKING DIRECTLY TO THE MANUFACTURER.

Crawler System Monitoring

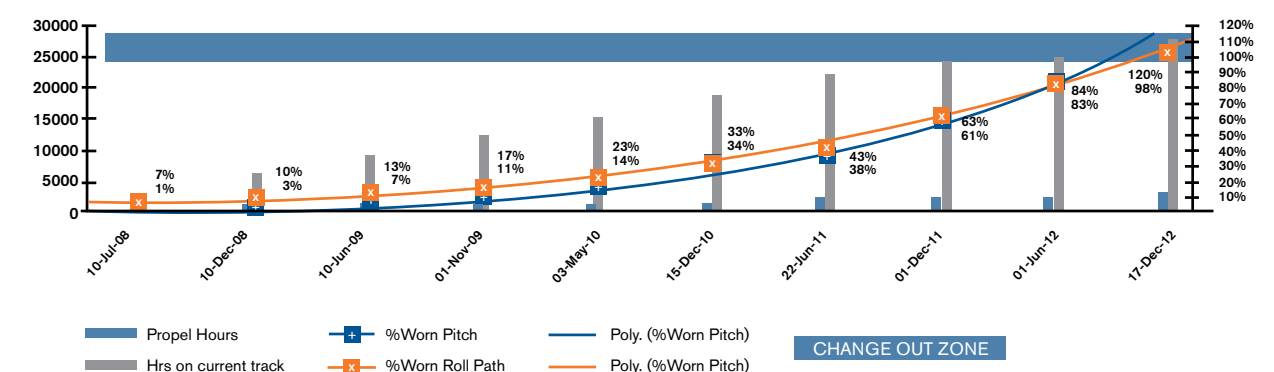
In order to continually improve our product offering and to help our customers achieve the maximum life expectancy from their undercarriage components, Bradken is able to offer a crawler system monitoring program. This service assists mine operators and contractors to obtain an accurate assessment of the amount of wear on their undercarriage components.



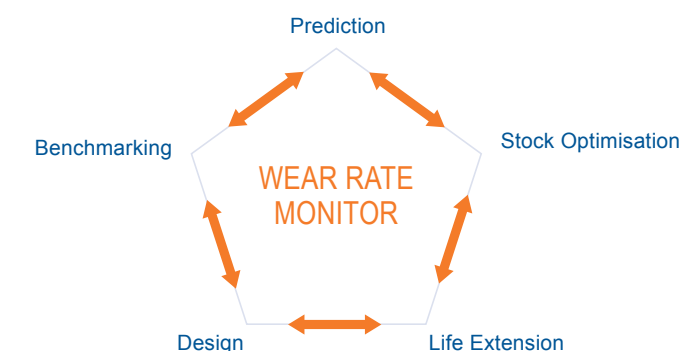
Just as mining conditions vary from site to site, so too do the wear characteristics of the undercarriage components. By monitoring the wear on the undercarriage components a program can be implemented to achieve maximum life from all components.

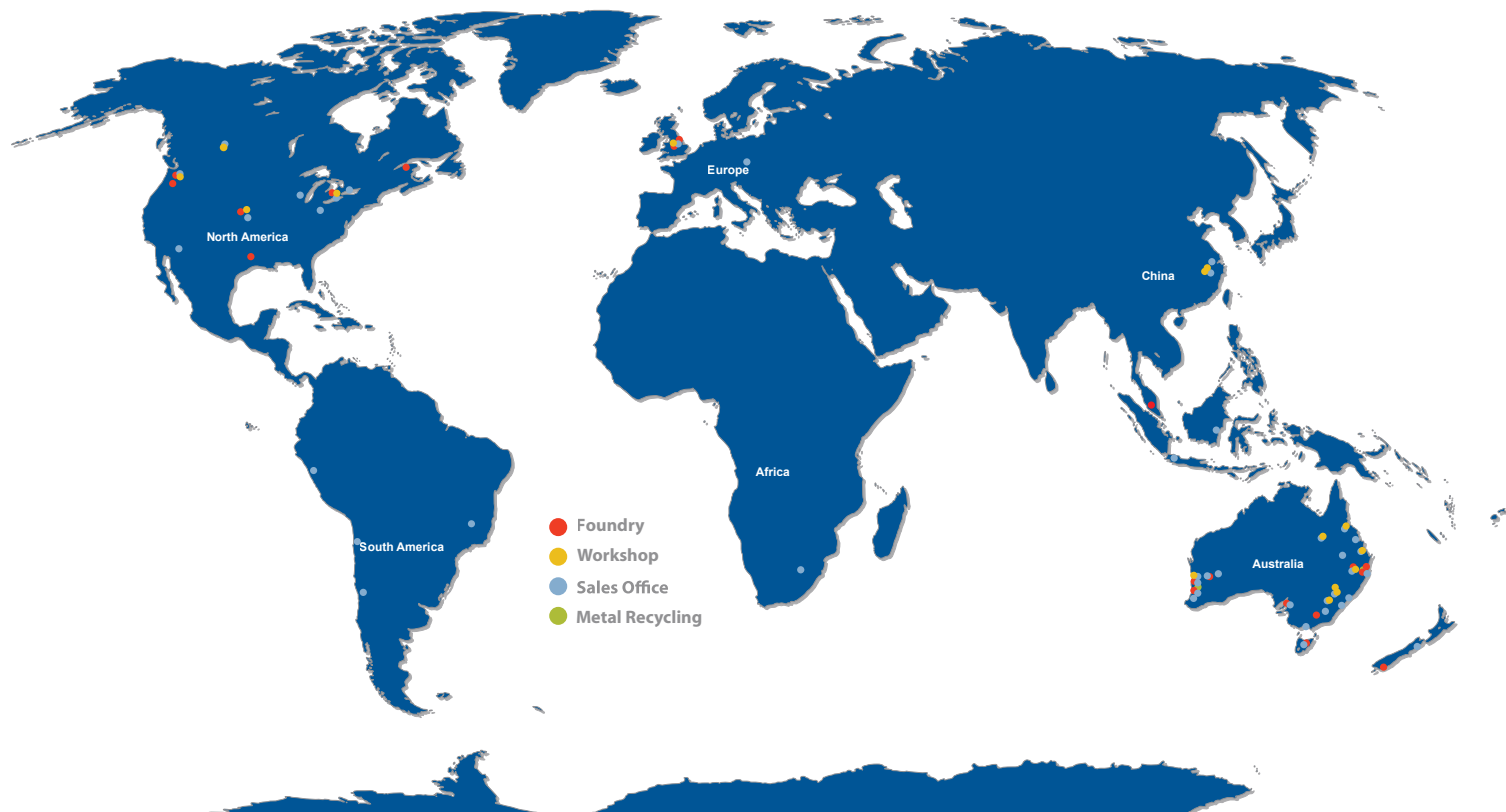
This preventative maintenance service can also help in scheduling to give maintenance planners a good indication of when replacement parts will be required.

Wear Analysis (RHS) Pitch Extension and Roller Path



If you would like to implement a crawler system wear monitoring program contact your Bradken regional representative.





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