



Special Purpose Machinery for the Material Processing Industry



# Our Crushing Heritage

Established in 1897 as a leading manufacturer of mining machinery, the company became known as British Jeffrey Diamond Limited in 1928, pioneering innovations in material processing applications. Today BJD Crushers proudly claims the title of 'The Original Crusher People'.



With over 125 years of experience, BJD Crushers offers a comprehensive range of high capacity crushing and material processing equipment designed to control product size. Our solutions span a vast array of applications, providing both standard equipment and bespoke packages tailored to individual customer specifications.

BJD Crushers' equipment is renowned worldwide, excelling in primary, secondary, and tertiary applications. Our machinery is known for its high throughput, robust build, and low operating costs.

### Main Product Lines include:

- ♥ Flexmill Crushers
- Impactor Crushers
- Mudhog Crushers
- ♥ Roll Crushers
- ▼ Flextooth Crushers

In 2023, BJD Crushers Ltd became part of Group Rhodes, one of Europe's leading manufacturers of special purpose equipment for markets such as metal and composite forming, heavy ceramics and material handling. This partnership has enhanced our technical capabilities, ensuring we continue to develop new solutions to meet evolving customer needs.

Main (left) Historic BJD Exhibition stand featuring full BJD Crushing Range

**Top** BJD's manufacturing facility includes machining, fabrication and assembly departments.

Above BJD Commercial Office

Below Company's Wakefield Site

Main Right Two BJD 24 x 30 Hammermills delivered to the Democratic Republic of the Congo.

Top BJD Flexmill in testing prior to dispatch.

**Above Left** Diagram demonstrating the internal mechanisms of a BJD Hammermill.

Above Right BJD Flexmill installed on site.

Below Two 15 x 8 BJD Hammermills.

HAMMERMILL		FLEXMILL	
Model Range	15 x 8 to 36 x 48	Model Range	1011 to 1720
Net Weight (KG)	508 to 8390	Net Weight (KG)	8583 to 37,135
Inlet Opening (mm)	210 x 210 to 457 x 1219	Inlet Opening (mm)	512 x 1270 to 1070 x 2236





## Hammermill & Flexmills

Hammermill and Flexmill machinery has been integral to BJD's success since the late 1800s. Both milling systems offer flexible design and incorporate features that provide operational and maintenance advantages.

### **BJD Hammermill**

Our Hammermill range can reduce materials down to 1mm in a single pass, making it suitable for industries from ore mining to waste-derived fuel. The product line ranges from the smallest  $15 \times 8$  to the largest  $36 \times 48$  models. Key benefits include high reduction ratios, adjustable breaker plates, and optional metal traps to prevent excessive chamber wear.

### **BID Flexmill**

For high throughput and high reduction crushing applications, the BJD Flexmill offers complete flexibility in production sizes, wear rates, and ease of operation. Capable of handling up to 1000tph, the Flexmill is a cost-effective solution for refining friable materials of medium hardness.

Features include a choice of bearing designs, hydraulic opening for maintenance ease, and reversible operation to maximise hammer life with minimal downtime.

### **Key Benefits**

- Eight model sizes
- Rotor diameters range from 1.0 to 1.7 metres
- Rotor widths from 1.1 to 2.0 metres
- Capacities up to 1000tph dependent on duty

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# Impactors & Mudhogs

BJD offers state-of-the-art Impactor and Mudhog Crushers for primary and secondary crushing applications.







**Roll Crushers & Flextooths** 

applications.

BJD's Roll and Flextooth Crushers provide advanced solutions for specific

material processing needs, offering efficiency and reliability in various industrial

### **BJD** Impactor

Our Impactor range includes six standard model sizes, from the Impact 1410 Crusher to the Impact 1623, capable of handling tonnages in excess of 1000tph depending on the duty. With some of the heaviest rotor weights in its class, the BJD impactor delivers exceptional performances in tonnage, product shape and reduction ratios, producing single sizes in one pass. Features include boltless impellor bars and a shear pin device to protect against damage from uncrushable materials. This product is ideal for recycling and aggregate operations.

### **BID** Mudhog

The Mudhog is available in eight standard model sizes. It's specifically designed for reducing wet and sticky materials with up to 40% moisture content, which would typically cause blockages in standard crushers. Capable of handling up to 2000tph, the Mudhog can crush and blend simultaneously, making it perfect for mining, quarrying and recycling applications.

### **Key Benefits**

- Model range suitable for permanent, mobile, demountable and container systems
- Single direction and reversible units
- Easily adjustable to give varying product sizes

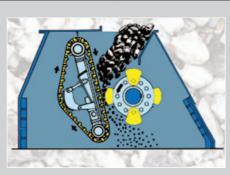
Main Left BJD Crushers Mudhog.

Top BJD Crushers Mudhog Design.

Above BJD Impactor undergoing final tests.

 $\ensuremath{\mathbf{Below}}$  Diagram showing the self-cleaning process of the BJD Mudhog.

IMPACTOR		MUDHOG		
Model Range	1410 to 1623	Model Range	2012 to 5484	
Net Weight (KG)	18,150 to 65,000	Net Weight (KG)	1682 to 30,500	
nlet Opening (mm)	900 x 1160 to 1200 x 2294	Inlet Opening (mm)	330 x 406 to 1200 x 2160	



Main Right Two 3 tonne rolls in final testing for 90150 Double Roll Crusher.

**Top Left** BJD Double Roll Crushers deployed on site for the reduction of limestone for building block production.

Top Right Automatic Protection Device.

**Above** Roll Crusher designed to produce consistent size and shape of material.

Below Diagram illustrating the crushing process.

DOUBLE ROLL CRUSHER		FLEXTOOTH	
Model Range	6050 to 90,150	Model Range	20x16 to 42x72
Net Weight (KG)	4800 to 18,500	Net Weight (KG)	1364 to 14,273
Inlet Opening (mm)	200 x 948 to 400 x 1560	Inlet Opening (mm)	406 x 406 to 975 x 1829



### **BJD Roll Crushers**

Our Roll Crushers are designed for the controlled reduction of friable materials to granules, suitable for both primary and secondary applications. Features include robust construction, adjustable settings, and a low-profile design.

Available in both toothed and smooth roll options with capacities up to 200tph depending on duty, our Double Roll Crushers are perfect for minimal fines, low dust and noise emissions and are fitted with a fully adjustable roll gap for a variety of product settings.

### BJD Flextooth Crushers

The Flextooth Crushers combine the benefits of shear/attrition crushing with impact. This dual functionality provides the flexibility to handle a wide range of materials and applications. Flextooth Crushers are known for their high capacity, uniform output, and minimal fines production.

Capable of capacities of up to 500tph and powers up to 225kW, our Flextooth Crushing range is robustly constructed for all material processing applications.

Custom-built packages can be supplied comprising crusher, motor, drive and base frame plus other ancillary equipment as required.

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# Material Handling Systems

Material processing is at the core of BJD Crushers' success. We continuously invest in research and development to enhance our product offering and introduce new, advanced solutions to the market.

## **Custom Solutions**

At BJD Crushers, we understand that every material processing requirement is unique. Our team of experienced engineers works closely with customers to design, develop, and implement bespoke crushing systems that deliver optimal performance and efficiency.



### Conveying Systems:

installation of conveying equipment. It was formerly marketed under the 'Numec' name which was renowned for its introduction of sidewall conveyors and elevators into the UK during the 1960's.

The company has since developed its products for the bulk handling sector and supplies both conventional & sidewall Conveyors and Elevators, Belt or Chain Bucket Elevators and Screw Conveyors, either singularly or as a complete system. Working alongside its sister company Hallamshire Engineering Services, BJD offers a wealth of experience in most material characteristics and applications.

### **Data Acquisition**

BJD has developed Advanced (AI) data acquisition and fault diagnostics to monitor and enhance the performance of its machinery. This includes:

- Real-time data collection and processing
- Preventative maintenance scheduling
- Visualization and reporting

Main Left Stockpile conveyor application Top BJD conveying system in application Above Schematic Data Acquisition System Main Right BJD 15 x 8 Hammermills being inspected before shipment

Top Three BJD 20 x 12 Hammermills

Above Technical Design Department Below Customised Weight Belt Feeder

# Global Reach & Support:

Specific material handling requirements

Specialised wear parts and maintenance plans

Integrated systems and automation

Tailored equipment design

BJD Crushers operate on a global scale, providing high-quality crushing solutions to customers around the world. Our extensive network of distributors and service centres ensures that we can offer support and expertise wherever our equipment is in operation.

- Comprehensive after-sales service and support
- Training programs for operators and maintenance personnel
- Spare parts availability and rapid response service teams

Our Custom Solutions Encompass:

Export capabilities to meet international standards and requirements

We are committed to providing exceptional support to our customers, ensuring that their BJD equipment operates at peak performance throughout its life cycle.





BJD has over 100 years experience in the design, manufacture, and **Below** Bucket Elevator drive section

Predictive Analytics and machine learning

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Top left Site featuring BJD Mudhogs for processing overburden materials in Germany. Bottom left Two BJD Hammermills installed into heat and power plant in Poland Right BJD Mudhog has been installed to assist in processing and blending materials for a leading loams and top dressings producer in the UK.



### The Original Crusher People

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