

# Performance Study

Ref. No.: 22-029A

Commodity  
**Gold and Copper**

Technology  
**ERC® Eccentric Rolls Crusher**

Application  
**Primary Crushing**

Study type  
**Field Test**

Country  
**Australia**

## The new ERC® crusher improves throughput, product fineness and energy consumption

Field testing of the ERC® eccentric roll crusher at an Australian mine demonstrated a 10% increase in throughput compared to existing jaw gyratory crushing technology. This more compact crushing technology also delivers improved product fineness and consumes up to 50% less energy.

The Australian mine was operating successfully with BK 63-75 gyratory jaw crushers but was interested in utilising the much smaller ERC for future expansion projects. Due to its size – it is 30% lighter and 13% - 20% lower than conventional hard rock primary crushers – the ERC much easier to transport, install, and maintain than larger crushers. This makes it an ideal solution for mobile and semi-mobile in-pit crushing applications.

The key value drivers of the trials were improved product fineness and throughput, as well as reduced energy consumption. The ERC delivered on each of these:

- 10% higher throughput compared to the existing BK 63-75 gyratory jaw crushers.
- Improved product P80 of 110 mm at a CSS of 90 mm versus a product P80 of 110 mm to 125 mm with the existing crushers.
- Average specific power consumption of 0.18-0.21 kWh/t compared to 0.25-0.35 kWh/t.

The ERC is designed for greater efficiency and productivity compared to other primary crusher types, featuring a roller body arranged eccentrically between the screen and the crushing chamber. It also incorporates a fully-hydraulic gap setting/retraction system, which offers a wider range of gap settings than alternative crushing solutions. This patented system allows for safe and simple adjustment of product size; it also allows operators to easily adjust the crusher to compensate for liner wear and to release tramp metal or other uncrushable materials.

Meanwhile, the lower potential specific power consumption has the potential to reduce CO<sub>2</sub>e emissions. The final result is a crusher that is safer, more efficient, more productive, and with a lower environmental footprint.



**10%**  
Increase in  
throughput



**50%**  
Reduction in  
energy consumption



**13-20%**  
Reduction  
in height

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