

# Back to work fast and safe

Epiroc breakers have always been customers' first choice when it comes to challenging applications, because of their superior productivity, reliability and serviceability.

In general, serviceability can be measured through the operational ease of changing parts and returning the equipment to operation with a minimum loss of productivity. For that reason, the labor hours spent changing wear parts play a significant role in a machine's serviceability. The lower bushing is one of the most commonly replaced wear parts in the breakers.

## Inserting and extracting the lower bushing

The main function of the lower bushing is to center the working tool, so that energy losses during the impact of the piston are prevented. In the production stage of all breakers, the lower bushing is placed into the housing chamber of the lower hammer part by freezing and after start working it extends in the inside due to high working temperatures arising in the breaker.

Despite the high quality of the raw materials used, the friction between the working tool and the wear bush, combined with the extreme working conditions, will ultimately end the life time of the lower bushing. Replacing the lower bushing has always been a long, tough and expensive service task, for medium and heavy sized breakers.

The traditional process involves transportation of the breaker to the workshop. The breaker is then dismantled, taking out the lower hammer part. The wear bush is extracted with a hydraulic press or by cutting and welding. The new wear bush must be frozen for a while to reduce its size to allow it to fit into the lower hammer part, it is then placed and the breaker is resealed. Cutting and welding are dangerous operations that do not follow the approved safety health and environmental quality standards. Furthermore, carved out particles can go into the piston chamber and damage the breaker.

Thanks to our new revolutionary product, the bushing extractor, turns this long operation into a simple task.

#### What is it?

- A smart tool to remove and insert the lower wear bushings for MB and HB breakers on site
- No need to bring the breaker to the workshop



## The bushing extractor

The bushing extractor is a tool to remove and insert lower wear bushings for MB and HB breakers on site without dismanteling or resealing the breaker.

As a result, all related transportation and labor costs are saved. On top of that, it helps our customers to sustain their productivity by increasing the uptime of breaker.

## Main benefits

#### Gain competetiveness

Reducing machine downtime around 92% percent and our fix price offer around 50% percent makes the bushing extractor an attractive tool for both our direct and indirect sales channels to gain competitiveness.

#### Increase sales of bushings

Enhancing our competitive position gives us and our partners the opportunity to sell more wear bushes in the market through fix price repairs.

#### **Safety first**

Eliminates all risky operations like cutting and welding to replace the bushing.

#### **Attractive investment**

Bushing extractor is half machine and can be depreciated depending on the local legislations.

Yearly cost of the depreciation can easily be compensated by selling a few number of wear bushes.

## With bushing extractor







1HOUR operation at job site

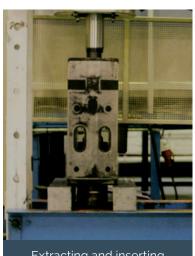
-50% repair cost

-92% downtime

Without bushing extractor



of the breaker



Extracting and inserting the lower bushing



Mantling and transportation to the job site







Designed for efficiency, built to increase your

productivity.



Description	Part number	Items
Bushing extractor tool kit	3363119690	12345
Wedge & pin set D=50 (HB 3100-HB 4700)	3363119701	6 7
Wedge & pin set D=40 (MB 1000-HB 2500)	3363119702	
Spindle MB 1000	3363119705	8 9 10
Spindle MB 1200/EC 120	3363119704	
Spindle MB 1500/EC 135	3363119703	
Spindle MB 1700/EC 140	3363119692	
Spindle HB 2000	3363119691	
Spindle HB 2200	3363121214	
Spindle HB 2500/EC 155	3363119693	
Spindle HB 3100/EC 165	3363119694	
Spindle HB 3600	3363119695	
Spindle HB 4100	3363119696	
Spindle HB 4700	3363119697	

- > The bushing extractor tool is available up to HB 4700.
- > Pins are used to place bushing extractor.
- > Spindle's function is to take the bushing out by making leverage and varies depending on the size of the bushing.
- Wedges are placed in the retainer bar housings to force the bushing out by hammering if it gets stuck.

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Performance unites us, innovation inspires us, and commitment drives us to keep moving forward.

Count on Epiroc to deliver the solutions you need to succeed today and the technology to lead tomorrow.

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