TOOL USER MANUAL & WARRANTY TERMS

- Moil Point
- Chisel
- Blunt
- Pyramid
- Dust Grooved
- Hard Rock

BREAK THROUGH
BUILD BEYOND

HKM

HKM

QUALITY
Hydraulic Breaker
TOOLS

Atlas Copco	Furukawa	MTB	Arrowhead
CAT	JCB	NPK	D&A
Daemo	Krupp	Okada	Fine
DNB	Komac	Rammer	Rotair
Epiroc	Kwanglim	Soosan	Seba
Hanwoo	Montabert	Topa	Togo
Indeco	MSB	Toyo	Italdem

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TOOL SELECTION

Breaker tools have three primary functions:

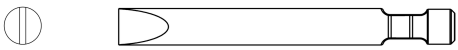
- Deliver 100% of the piston's impact energy into the rock for peak efficiency.
- Maintain high wear resistance to keep your breaker's operating costs under control.
- Protect critical hydraulic breaker components from damage and premature failure.

CHISEL TOOL

Chisel Tools are versatile, general-purpose breaker tools that combine robust cutting action with precise fracturing for **medium-hard** and **veined materials**. Their sharpened edge efficiently penetrates reinforced concrete and hard rock, supplying the power needed to tackle challenging substrates.

Designed for **durability** and **consistent performance**, Chisel Tools ensure reliable breaking in a wide range of applications:

- **Primary Demolition**
- **Secondary Demolition**
- **Trenching**
- **Recycling**
- **Scaling**
- **Primary Breaking**
- **Boom Mounted Applications**



MOIL POINT TOOL

Moil Point Tools are specifically crafted for materials that are loosely bound or easily separable. Their slender, tapered profile allows for pinpoint tip placement, ensuring each impact drives the tool directly into the material without deflection. This precision engagement minimizes chatter and slippage, delivering **consistent penetration** and **efficient removal of loose substrates.**

Engineered for accuracy and dependable results, Moil Point Tools provide **effective breaking** in a wide range of applications:

- **Primary Demolition**
- **Primary Breaking**
- **Trenching**
- **Scaling**
- **Recycling**

BLUNT TOOL

Blunt Tools are engineered to channel the breaker's **full impact energy straight into the toughest materials.**

Built for **maximum energy transfer** and **durability**, Blunt Tools ensure consistent breaking performance in a wide variety of applications:

- **Primary Demolition**
- **Secondary Demolition**
- **Secondary Breaking**
- **Boom Mounted Applications**
- **Tunneling**

PYRAMID TOOL

Pyramid Tools excel at rapidly penetrating non-abrasive materials of varying strengths. Its pointed geometry and optimized cutting angle make quick work of concrete and similar substrates, achieving **high penetration rates** with **minimal effort.**

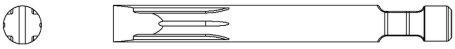
Designed for **versatility** and **efficiency**, Pyramid Tools deliver reliable breaking across a wide range of applications:

- **Primary Demolition**
- **Secondary Demolition**
- **Trenching**
- **Recycling**
- **Tunneling**
- **Primary Breaking**
- **Landscaping**

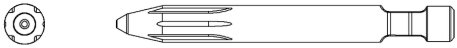
DUST GROOVED TOOL

Dust Grooved Tools are engineered with **integrated channel**s that efficiently guide dust and fine particles away from the breaking zone. This design not only improves visibility and precision during operation but also reduces tool wear and heat buildup, ensuring **longer service life** and **consistent performance.**

Available for **Chisel**, **Moil Point**, and **Pyramid Tools**, Dust Grooved options enhance productivity and reliability in demanding applications.



Dust Grooved Chisel Tool



Dust Grooved Moil Point Tool

Dust Grooved Pyramid Tool

HARD ROCK TOOL

Hard Rock Tools are manufactured from **premium high-nickel alloy** and undergo a specialized hardening process to withstand extreme impact forces and the harshest abrasive rock conditions.

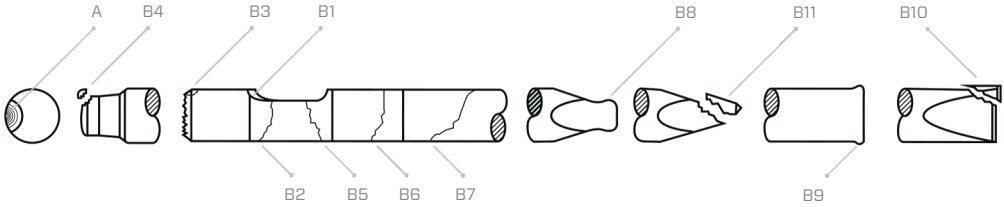
Their reinforced structure delivers **maximum durability**, **extended service life**, and **reduced downtime**, making them the preferred choice for heavy-duty quarrying and mining operations.

Available for **all tool types**, Hard Rock Tools ensure consistent performance in the most demanding environments.

MATERIAL BASED TOOL SELECTION

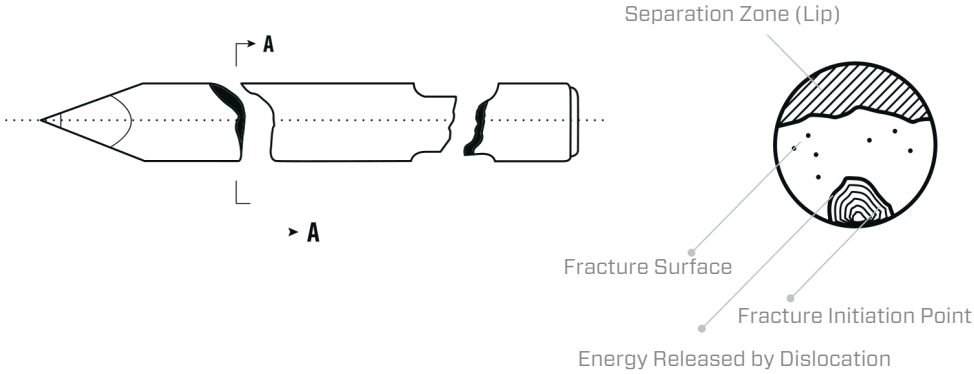
Material	Application	Condition	Recommended Tool
Reinforced Concrete	Thin & thick slabs, wall cutting	Reinforced	Chisel Tool
	Foundations	Reinforced	Chisel Tool
	Blocks, columns, support structures	Reinforced	Chisel Tool
	Recycling demolition debris	-	Blunt Tool
Unreinforced Concrete	Thin & thick slabs, wall cutting	Unreinforced	Moil Point Tool
	Foundations	Unreinforced	Moil Point Tool
Sedimentary Rock (limestone, sandstone, graywacke...)	Trenching, foundation work, primary quarry breaking	Heavily fissured	Chisel Tool
		Lightly fissured	Moil Point Tool
		Monolithic	Moil Point Tool
		Monolithic	Pyramid Tool
	Oversize block breaking	-	Blunt Tool
Crystalline / Magmatic Rock (granite, gabbro, greenstone, magma...)	Trenching, foundation work, primary quarry breaking	Heavily fissured	Chisel Tool
		Lightly fissured	Blunt Tool
		Monolithic	Blunt Tool
	Oversize block breaking	-	Blunt Tool
Asphalt	Road surface cutting, transport routes	Soft structures	Chisel Tool Wide Chisel Tool Asphalt Cutter
Frozen Ground	Trenching & drilling	-	Chisel Tool Wide Chisel Tool Asphalt Cutter

RECOMMENDATIONS & WARRANTY TERMS



HKM tools are covered under the manufacturer's warranty based on each tool's observed fracture pattern. The manner in which a tool breaks provides us with valuable information about how the breaker was operated and the forces it encountered during use.

TOOL FRACTURE CROSS-SECTION



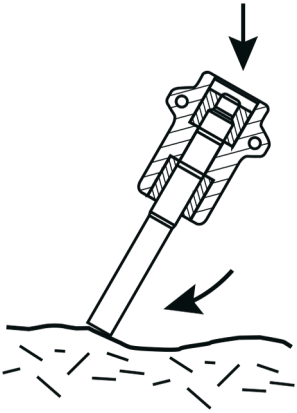
A-B-C : As fracture energy increases, the proportion of the shaded zone grows. In real load-induced fractures, this area is even larger. In high-energy breaks, the lip (separation) region on the fracture surface tends to be smaller.

D: Ductile Fracture Surface

E: Wear or scratches on the tool's outer surface act as stress concentrators, initiating micro-cracks that can cause the tool to fail under even very low lateral loads. This damage typically results from:
- Insufficient lubrication
- Use of incorrect grease

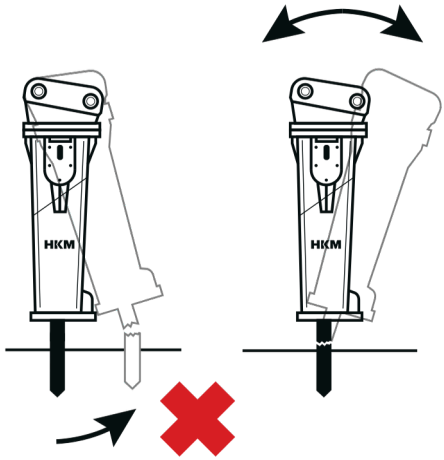
For the correct grease specifications, please consult your breaker's service manual.

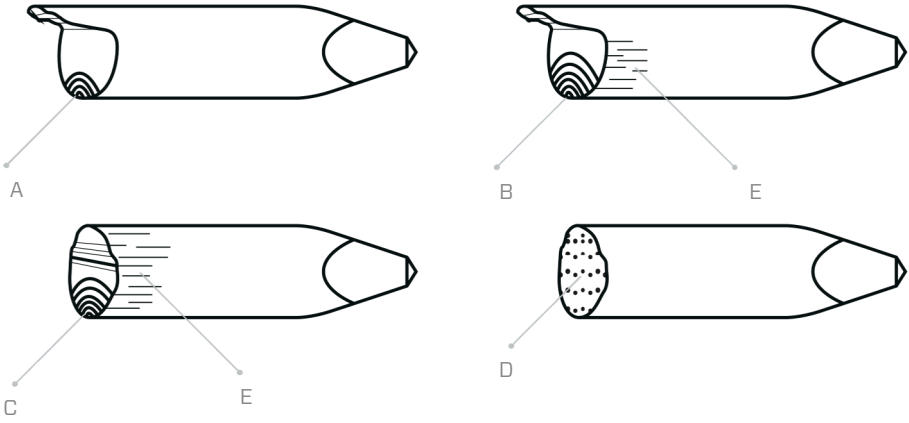
If the excavator's boom doesn't apply force perpendicular to the target surface (rock, masonry, etc.), it can accelerate bushing wear and cause the piston to run off-axis. To prevent this, position the breaker vertically and avoid imposing side loads on its components.



Performing lever-style rocking motions after the tool tip has been embedded in the target surface, and making push-pull movements without fully retracting the tip, is the single biggest cause of tip breakage.

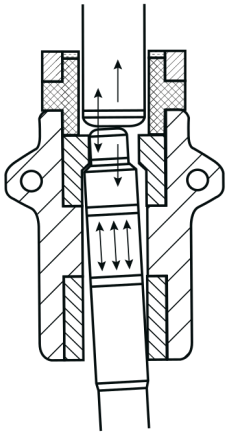
This type of breakage is not covered under warranty.

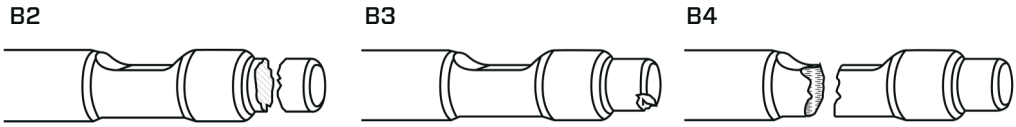




Operating with worn breaker bushings can lead to chipping or fractures on the contact surfaces between the tool and the piston. To prevent this, verify that the bushings remain within the dimensional tolerances specified in the service manual.

Damage caused by worn bushings is not covered under warranty.





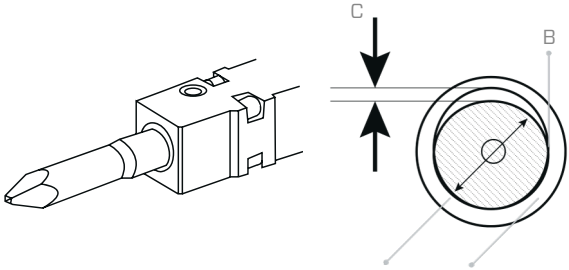
Worn or Clearance-Affected Breaker Internal Components

For efficient breaker tip performance and full transfer of piston energy to the target surface, it is critical that the mating bushings remain within the tolerance ranges specified in the service manual.

Bushing surfaces should be inspected at regular intervals in accordance with the tolerances specified in the breaker's service manual. If wear occurs more rapidly than indicated, both the lubrication frequency and the quality of the grease used must be checked.

Wear occurring in the bushings' inner diameter can misalign the contact surfaces between the tool tip and the piston, potentially causing breakage of the tool—or even the piston itself. Additionally, wear on the thrust ring surface can change the piston-to-tool impact distance, preventing the breaker from operating correctly.

During breaker maintenance, be sure to check not only the inner diameters of the lower tool bushing and the upper bushing but also the surface condition of the thrust ring.



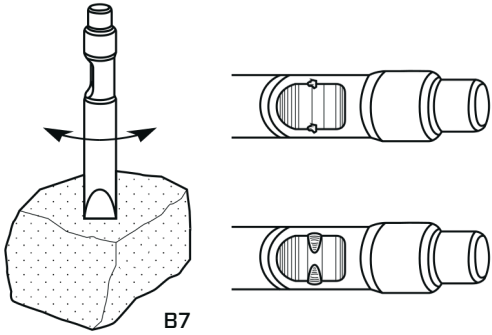
These fractures typically result from torsional stress induced by lateral forces acting on the breaker as it moves or is rotated while embedded in the material.

This type of breakage is not covered under warranty.

Rotary Motion

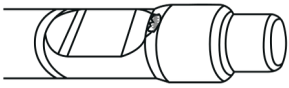
When using a chisel tool for breaking, the tool's tendency to rotate along its travel path causes wear in the retaining pin slots. These worn surfaces act as stress concentrators, making it easier for the breaker to fracture at the retaining pin slot. (See B2, B5.)

This type of breakage is not covered under warranty.



B7

B1

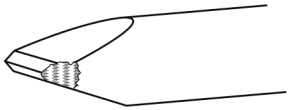


Blank Firing

When the breaker tool strikes without contacting the target breaking surface, known as blank firing, all of the impact energy is absorbed by the breaker's safety components. In such cases, the first parts to suffer damage are the retaining pins and the retaining pin slots of the tool.

Ongoing operation under these conditions will lead to broken retaining pins and destroyed slots. ultimately rendering the breaker tool unusable.
This type of breakage is not covered under warranty.

B5

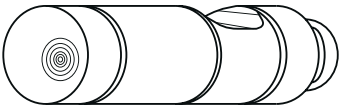


Fractures in Breaker Tool Tips

These fractures occur when the breaker tool is driven into the target surface by the excavator boom's motion. To avoid such damage, position the tool tip firmly against the surface in a stationary position before depressing the breaker control pedal.

When these impact-induced fractures occur on the breaker tool tip, the tool tip can be dressed by grinding to restore its profile and the tool can continue operating.
This type of breakage is not covered under warranty.

B6



As illustrated, when the dislocation or fracture initiation point lies entirely within the tool's cross-section, it indicates that internal inclusions in the steel caused the failure.

Such defects are covered under warranty.

BREAK THROUGH
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