

MERIT®

BB3301A2 HARD ROCK CHISEL



High-Performance Hydraulic Breaker Tool for Severe Rock Fragmentation and Continuous Heavy-Duty Operation

MERIT – Precision-Engineered Solutions for Hydraulic Breakers

1. Product Overview & Engineering Concept

The MERIT BB3301A2 Hard Rock Chisel is a heavy-duty hydraulic breaker tool specifically engineered for high-impact energy transmission in extremely hard and abrasive rock formations. The design philosophy focuses on structural strength, fatigue resistance, and dimensional stability under prolonged operating cycles.

With a diameter of 8.46 in and an overall length of 69.29 in, the BB3301A2 is dimensionally optimized to maintain a balanced mass distribution, ensuring efficient energy flow from the piston to the working tip while reducing internal stress concentration along the tool body.

MERIT applies OEM-equivalent engineering standards, combining precision CNC machining with controlled multi-stage heat treatment processes. This results in a hardened surface layer for wear resistance while preserving a tough core structure capable of absorbing repeated shock loads without brittle failure.

2. Technical Specifications & Material Properties

Product Code	BB3301A2
Tool Type	Hard Rock Chisel
Diameter (D1)	8.46 in
Overall Length (L1)	69.29 in
Material Grade	High-strength heat-treated alloy steel
Heat Treatment	Multi-stage controlled process
Surface Hardness	Optimized for impact and wear resistance
Application	Hydraulic Rock Breakers – Heavy Class

The alloy steel composition is carefully selected to provide high tensile strength and resistance to plastic deformation. MERIT’s heat treatment parameters are tightly controlled to ensure consistent mechanical properties throughout the cross-section of the tool.

3. Performance Characteristics, Applications & Quality Control

The BB3301A2 Hard Rock Chisel delivers stable and predictable performance under continuous high-impact conditions. Its optimized working-end geometry ensures effective penetration into hard rock surfaces while minimizing rebound forces transmitted back to the hydraulic breaker.

Typical applications include quarry operations, mining excavation, reinforced rock demolition, and large-scale infrastructure projects where tool reliability directly affects productivity and operating costs.

Each MERIT chisel undergoes a comprehensive quality assurance process including dimensional inspection, material verification, and visual surface checks. This ensures that every BB3301A2 meets MERIT's strict internal standards and delivers long service life with reduced downtime.