

SEMI-MECHANISED DRILLING

SMI DRILL JIG



1.5 m in 2 minutes

More face advance per blast, with the same crew

1.5 m hole in 2 minutes. More panels drilled per shift without adding people.

UNDERGROUND APPLICATION

- At the face in conventional and mechanised stoping and development
- From 0.75 m operating width
- Bad hanging walls, dome slips, faults and dykes
- Methane pockets, fissures and holing examination zones
- Anywhere a trackless rig cannot reach or cannot be justified

TRIALLED AND TESTED

Lanxess Chrome Mines

Monorail Jig across two shafts, 25 000 t per shaft. Two-year contract; new standards and norms established for the Drill Jig.

2015 – 2018

Glencore, Rustenburg

Two 15 000-ton contracts executed with the Drill Jig

2017

Sibanye-Stillwater K6

15 000-ton contract managed by SMI

2018



**PRODUCT VIDEOS
ON OUR WEBSITE**

www.snatchmining.com

SMI DRILL JIG



THE PROBLEM — UNDERGROUND REALITY

- Rigs are tall, break down, and need access many panels do not have.
- Hand drilling puts the operator at the face in exactly the ground conditions where nobody should be standing.
- Hole direction and burden vary from operator to operator, so fragmentation and face advance vary with them.
- Drilling is physically punishing, and a tired crew drills fewer panels by the end of the shift.

THE SMI SOLUTION

A pneumatic drill jig suspended from a monorail on roof bolts or eyebolts, using inline thrust technology for faster drilling per hole and effortless extraction. Because it hangs from installed support, the jig **cannot operate without support in place** — there is no shortcut to take. Drilling is done remotely from 2 m off the face, and it works with all pneumatic machines and any hand drilling machine already on the mine.

BENEFITS

- **Accurate drilling removes the human factor** — hole direction and burden are set by the jig, not by how tired the operator is, so the hanging wall and footwall come out stable and to profile
- Smooth hanging and sidewall, proper face advance, and fragmentation control through direction and burden control
- Lower than rigs, reducing equipment height requirements, and less affected by equipment breakdowns
- Easy installation and assembly, reducing physical strain on operators
- Improves operator energy levels and enhances psychological awareness
- More panels drilled with the same workforce — fewer employees required at the face
- Capable of replacing trackless and semi-trackless rigs, improving face advance per blast — cost-effective and compatible with any hand drilling machine
- The existing workforce is trained and qualified as jig operators during the contract period

SPECIFICATIONS

ASSEMBLED WIDTH	0.4 m	COMPATIBILITY	Operates with all pneumatic machines
ASSEMBLED LENGTH	2.6 m development 1.6 m stoping	JUMPER SIZE / LENGTH	Site specific per desired hole depth (2.6 m)
ASSEMBLED HEIGHT	0.6 m – 3.5 m	DRILLING TIMES	1.5 m in 2 minutes 2.6 m in 3 min 20 s
MASS	Boom 35 kg Cradle 25 kg Monorail 7 kg	HARD ROCK EXTRACTION	15 seconds from extracting to collar of next shot hole
MONORAIL LENGTH	3 m / 6 m	AIR PRESSURE	3 – 7 bar
MINIMUM OPERATING WIDTH	0.75 m	HANDLING & STACKING	Moved on the face by hand; stacked clear of moving rock and material
EYEBOLT INSTALLATION DISTANCE	Site specific		

SUGGESTED SPARES

Defined spares set per product

IMPLEMENTATION

Dependent on the contract negotiated