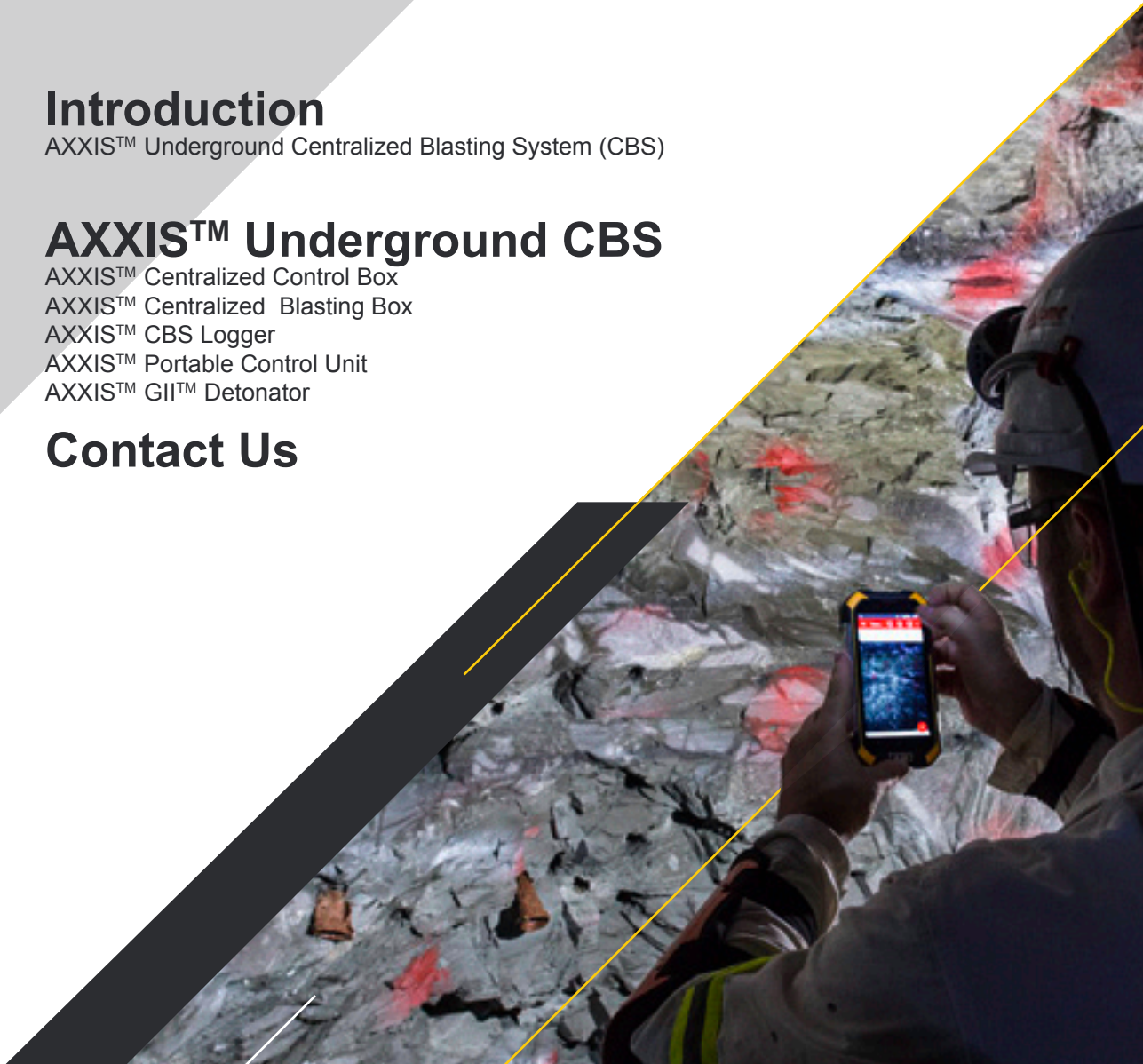
AXXIS

CENTRALISED BLASTING SYSTEM

CBS BROCHURE **20**18

TABLE OF CONTENT



Introduction

The AXXIS™ Underground Centralized Blasting System allows underground mining operations to initiate blasts from a safe and convenient place on surface. The system allows real-time local monitoring with remote access monitoring capabilities. The monitoring features built into the system ensures that an up-to-date AXXIS™ Centralized Blasting System status and overview is available. This feature greatly improves the pre-and post-blasting decision-making processes.

The AXXIS™ Underground CBS is compatible with the AXXIS™ GII™ electronic detonator. Leveraging off the AXXIS™ GII™ technology, the system is able to initiate electronic and non-electric detonators, maximising productivity.

The AXXIS™ Electronic Centralized Blasting System is based on the reliable and proven blasting electronics used in the BME Underground Centralized Blasting System and consists of the following components: Centralized Blasting Control Box, Centralized Blasting Box, Portable Control Box and the AXXIS™ CBS Logger.

The AXXIS™ system was developed in-house at BME, one of the largest explosives companies in Africa and listed on the JSE through its holding company Omnia. BME provides the AXXIS™ technology and associated technical support to the international market either directly or through various distributors.

With the extensive experience of BME and the management team, AXXIS™ is able to give customers peace of mind both in terms of product supply, technical support and performance.

For distributor information please visit **www.AXXIS.co.za**

AXXIS™ Underground CBS

The AXXIS™ Underground CBS with the GII™ detonator has the following benefits:

Easy to use: Real-time monitoring enables pre- and post-blast decision making. The integration of the AXXIS™ GII™ and VIPERDET™ series allows underground mining operations to blast production areas such as development drives, slots and rings, with the option of initiating non-electric detonators for stoping.

Flexible: The system is compatible with the AXXIS™ GII™ electronic detonator and can be used with copper and fiber networks or a combination of both.

Safer: Higher resistance to electrostatic discharge and high induced ground currents make the GII™ detonator safer to use in all mining conditions. The system will not fire if there is no uplink between the system components.

Robust: Each unit is IP65 rated and housed in a steel casing, protecting the system from water and dust, giving it a robust and rugged design for the underground environment.

AXXIS™ Centralized Control Box

The AXXIS™ Centralized Control Box is designed for Centralized firing of AXXIS™ Centralized Blasting Boxes.

Additionally, it continuously monitors and has a dedicated uplink with all connected AXXIS™ Centralized Blasting Boxes underground and provides a real-time system status overview.

The real-time data of the system overview can be accessed via the AXXIS™ CBS Graphical User Interface (GUI) or remotely through a web browser.

The system overview allows the status of the system to be known without the need to venture underground to collect information. The information includes pre-and post-blasting data which will assist in the decision making around blasting.

PRODUCT SPECIFICATIONS

Voltage
110 – 250 VAC mains supply

Operating Temperature Range
-5 to +45°C

Enclosure
Lockable steel, IP65 rated

Mass
12.5 kg

Number of Blasting Boxes per Control Box
100

Communication
Copper or fiber network

AXXIS™ Centralized Blasting Box

The AXXIS™ Centralized Blasting Box is specifically designed for the AXXIS™ CBS and is remotely controlled from the AXXIS™ Centralized Control Box installed on surface.

The AXXIS™ CBS provides reliable firing of up to 100 AXXIS™ Electronic Delay Detonators (EDDs) connected in parallel. It incorporates a cradle to allow for the reading of AXXIS™ EDD unique identifications (UIDs). The Box has automatic cable fault tracing and is able to isolate downstream cable faults.

PRODUCT SPECIFICATIONS

Voltage
110 – 250 VAC mains supply

Battery Life
12 hours backup (built-in battery)

Operating Temperature Range
-5 to +45°C

Enclosure
Lockable steel, IP65 rated

Mass
6.2 kg

Communications Interface
Bluetooth

Number of Blasting Boxes per Control Box
100

Range between boxes
400m

Communication
Copper or Fiber

AXXIS™ CBS Logger

The AXXIS™ CBS Logger is a portable device that is used to read the UID and allocate delays to the AXXIS™ EDDs that will be used for blasting.

After the AXXIS™ EDDs are placed in drilled holes, the AXXIS™ Logger can be used to read their UIDs and allocate delays.

The delays can be fixed across all the AXXIS™ EDDs or individually allocated depending on the requirements of the user. The UID and delay information can then be transmitted via Bluetooth from the AXXIS™ Logger to the AXXIS™ Centralized Blasting Box that is connected to the AXXIS™ EDDs.

PRODUCT SPECIFICATIONS

Voltage
3.7 V Li-Ion rechargeable battery

Operating temperature range
Operation: -20 to +50°C
Storage: -40 to +70°C

Thermal Shock
-40 to 70°C rapid transition

Sealing
IP65

Logging modes
Manual / Automatic

User Interface
Touch panel, finger or gloved finger input

Communication Interface
Bluetooth

Mass
376 g

AXXIS™ Portable Control Unit

The AXXIS™ Portable Control Unit is designed as a portable blasting unit, in the event of the main unit being faulty, for controlled centralized firing of the AXXIS™ Centralized Blasting Boxes underground.

The AXXIS™ Portable Control Unit is designed for controlled firing of up to 100 AXXIS™ Centralized Blasting Boxes.

PRODUCT SPECIFICATIONS

Voltage
110 – 250 VAC mains supply

Operating Temperature Range
-5 to +45°C

Enclosure
Lockable plastic container, IP65 rated

Mass
2.5kg

Number of Blasting Boxes per Control Box
100

AXXIS™ GII™ Detonator

The AXXIS™ GII™ detonator is a standard size detonator that will function in all standard sized boosters that are used in non-electric blasting.

AXXIS™ GII™ detonators use 2-core double insulated downline cables.

PRODUCT SPECIFICATIONS

Case of detonator
Magnesium aluminium alloy / copper alloy

Detonator size
Fits any standard booster

Cable type
Twin core copper cable, double insulated

Spool description
Cable spooled in shrink-wrapped spools with detonator feed from centre of spool for safety

Standard lengths
10m - 20m - 30m - 40m - 50m - 60m - 70m (other lengths available on request)

Connector
Yellow pin-hinged two-way connector with intelligent electronic data capability

Firing time range
0 to 15 000 ms in 1ms intervals

Accuracy
0 to 5000 ms < 1ms scatter
Operating temperature: -20 to +60°C

Storage temperature
-30 to +50°C

Shelf life
At recommended storage temperature - 48 months

Safety function
AXXIS™ GII™ detonators do not include any permanent energy source and there is no direct communication with the detonator during logging. AXXIS™ GII™ detonators will only function with AXXIS™ Blasting Boxes.

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