

BLASTDOG™

Orebody knowledge from the bench

BLASTDOG is a multi-sensor downhole data acquisition, analysis and visualisation system designed for mining, targeting higher ore recovery and better blast outcomes.

Orebodies are becoming more complex, grades are declining, skilled labour is getting harder to find. BLASTDOG combines automation and machine learning with a data-driven approach to help you better understand your orebody and rock mass.

BLASTDOG delivers rapid, reliable, and precise geoscientific and physical data and analytics from RC holes and blastholes, for better mine planning and blasting.

Applications



Reduce product loss & dilution

This is achieved with BLASTDOG, through more accurate blast hole and material characterisation. Better blast planning and implementation means greater resources recovered and reduced waste.



Fragmentation optimisation

Well-fragmented material is easier to handle, process, and transport.

This is achieved through better identification of structure, water, voids & hole size based on BLASTDOG data and analytics.



Plant throughput

Effective blast outcomes can lower the amount of contaminated materials in processing.

With an increased understanding of the presence of clays, other waste, and impurities at your site you can achieve improved material separation and identification of impurities.



Grade control - beyond grade

Grade control is critical for mine planning. By partnering with IMDEX you will achieve an improved understanding of the location, quantity, and quality of your orebody.

The whole package

Data acquisition

The multi-sensor probe is deployed by a semi-autonomous logging robot to collect geophysical and physical data.

Borehole data is available within minutes of logging and QA/QC'd data is compiled at the end of shift.

Data & analytics

Standard and customised cloud-based analytics and spatial modelling is compiled using BLASTDOG and third-party data.

Data visualisation

IMDEXHUB-IQ: cloud-based operational interface for rapid access and visualisation of logging activity and data.

MinePortal: A web-based visualiser for BLASTDOG data and analytics and other site data.

Acquisition

BLASTDOG's data acquisition system operates on a 2-tonne, all-terrain excavator operated remotely with semi-autonomous functionality.

Geophysical data and blast hole physicals are collected at 1cm intervals, and can be supplied in your preferred sample interval.

Geophysical

- ✕ Long and short conductivity
- ✕ Magnetic susceptibility
- ✕ Natural gamma

Physical

- ✕ 8-arm calliper
- ✕ Accelerometer
- ✕ Magnometer

Specifications

Probe length	1.75m
Upper sensor – bottom of probe	1.5m
Diameter	105mm
Variable hole size	125 - 300mm
Log vertical or angled holes	
No Active Radiation Source	

Data & analytics

IMDEX turns data into knowledge, with QA/QC built in.

data that's acquired through BLASTDOG and how it combines into something truly useful.... sensor stack and raw data from

Analytics

- ✕ Water level
- ✕ Void detection
- ✕ Volume specification for blasting
- ✕ Verticality
- ✕ Azimuth
- ✕ Rock competency
- ✕ Lithological unit picking
- ✕ Rock type discrimination
- ✕ Blast domains
- ✕ Oxidation boundaries
- ✕ Strand/top of unit

Spatial modelling

Automated and on-demand spatial models, including surfaces and block models (viewable in MinePortal)

Tailored and custom analytics

BLASTDOG's sensor data can be combined (inc. with other geological data) to produce derived parameters for your operation

Flexible on data format and integrations

Visualisation

Data, information or knowledge derived from BLASTDOG can be visualised with IMDEXHUB-IQ or in 3D within MINEPORTAL without the need for exporting/importing.

IMDEXHUB-IQ

Our cloud-based operational interface for rapid access and visualisation of acquisition activity and data.

- ✕ Real-time data
- ✕ Hole and pattern status information
- ✕ Hole-by-hole geophysical + calliper sensor traces
- ✕ Hole physicals: water level, hole depth and fallback, hole diameter and volume variation

MINEPORTAL

A visualiser for BLASTDOG data, site data and analytics.

- ✕ Allows multiple linked windows, filtering, plus integration of the attributes.
- BLASTDOG data can be visualised in full
- ✕ resolution, without the need for exporting/importing.

IMDEX is a leading global mining technology company that enables drilling contractors and resource companies to safely find, define and mine orebodies with precision and at speed.



Our drilling optimisation products, rock knowledge sensors and real-time data and analytics provide you with all the benefits of working with one trusted technology provider for a complete solution.