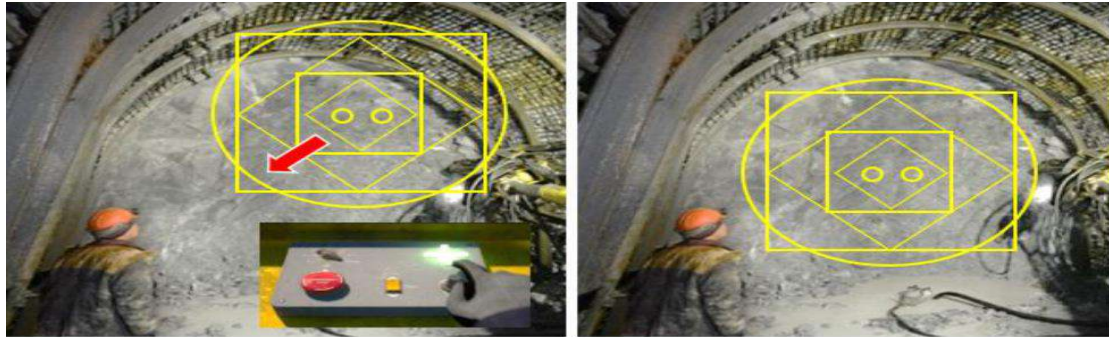


BLASTHOLE MARKER

Laser Projectors For Mining



About The System

The system is designed to project laser markings onto the coalface for drilling blast-holes in exact accordance with the drawings. Using the system allows you to improve the efficiency and safety of drilling operations. The equipment can project the entire range of standard and non-standard schemes of blast-hole locations.

Features

- Explosion proof.
- Self-diagnostics.
- Moisture and dust resistance.
- Ease of placement and anchoring.
- Drilling drawings in table form or DXF.
- Rugged configuration for stable operation and vibration resistance.

Application

The projection of blast-holes is performed by one or two laser beams according to the drilling drawings. Laser pointers are installed on the roof of the drilling vehicle. The drilling drawings are stored into the system's memory and can be easily activated. Non-standard drilling drawings can be uploaded to the system in DXF format as well as previously uploaded drawings can be edited.

Advantages

The system reduces the time for blast-hole marking to a few minutes.

Description

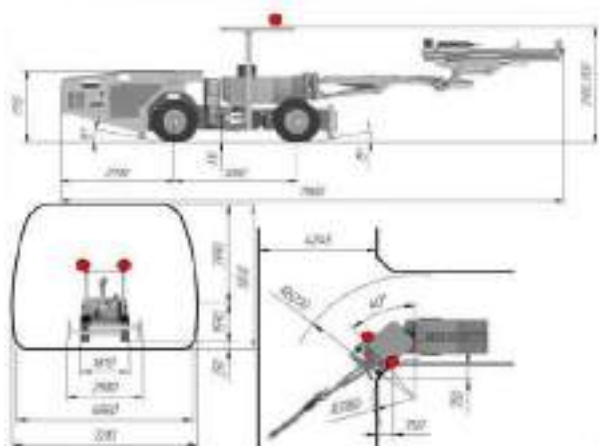
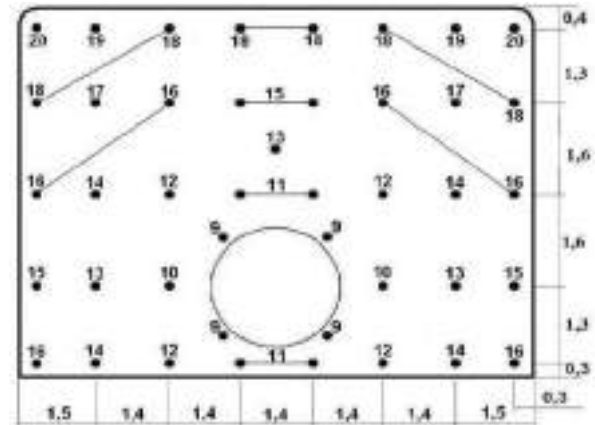
Laser alignment starts with the initial alignment of the laser to the surface of the coalface. The operator selects the alignment pattern on the tablet. There are a few patterns for the alignment procedure.

Depending on coalface geometry and personal preferences the operator can opt either "circle and center cross" or "coaxial circles and corner crosses" patterns.

Having linked the laser projector to the face the operator opens desired drilling drawing and, in necessary, performs its fine tweaking. During targeting of the drill as well as during drilling process a few types of projections can be chosen.

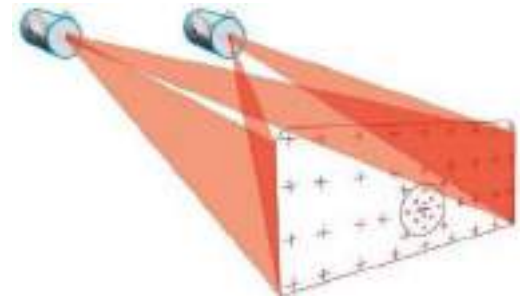
Since all the operators have their own traditions and preferences in drilling the flexible approach in laser projection is provided.

In the most cases drilling starts from the ceiling and then goes down. Therefore, the software guides the operator from the top blast-holes to the bottom ones, from the left to the right.



The System Can Highlight

1. The Current Blast-Hole.
2. The Whole Drilling Drawing.
3. The Previous Hole Plus The Current One Plus The Next One.



The Blast Holes & Safety

The system guides the operator step by step so that the likelihood of any mistake eliminates.

The blast-holes can be displayed as circles, crosses, net. If the process of drilling requires providing tips to the operator these short messages also can be projected.

All the parts of the system can be readily dismantled from the drilling machine and mounted back, if necessary, because of safety reasons or for maintenance.

Although the parts of the system are water and dust proof, a special version of the system for extreme conditions is available. It includes such features as compressed-air knife for keeping optical windows clean, bumpers against falling rocks, heaters, and coolers for high or low temperature operation.



Specification

Laser Emitter:	Green, Up To 50mw
Principle Of Projection:	Rotating Mirrors
Distance Alignment Principal:	Laser Rangefinder Combined With Projecting Beam
Distance:	From Drilling Machine To The Coalface Between 6 And 20 Meters
Accuracy:	Up To 1 mm

Environmental Conditions

Ambient Temperature:	- 20°C +60°C
Air Humidity:	Less 90 %
Atmospheric Pressure:	750 ± 30
Power:	24 DC
	18-27 V From Drilling Vehicle's Power Supply
Warranty:	3 years

Basic Configuration Includes

One Or Two Laser Projectors
 Rugged Tablet
 Fixtures
 Cables
 Software
 User Manual, Maintenance Papers, Troubleshooting, Spare Parts Papers