

ACTIVE METAL DETECTION SYSTEM SURFACE AND BOREHOLE UPEX 745 P2I



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The new UPEX® 745 P2I system offers substantial advantages in subsurface search due to its flexibility and the wide choice of transmitter and receiver components. The UPEX® 745 P2I can be optimized for different tasks and operations. It suits for standard on surface usage as well as for borehole inspection.

Due to an improved decoupling from the inspected medium the typical interference from soil magnetic effects (i.e. basalt rock) can be suppressed. Therefore unwanted signals from small scraps can be eliminated. In comparison to conventional magnetic surveys it allows much larger grids with substantially fewer boreholes. This reduces cost, improves revenue even when submitting very competitive offers.

Borehole inspection

For active borehole inspection a transmission coil of 20 m x 20 m or 40 m x 40 m – if necessary even larger – is laid out over the borehole field. The receiver probe resembles the known differential magnetometer probes in shape and size and is used in a very similar way as in magnetic borehole inspection. The active borehole inspection devices have a superior lateral detection range allowing to increase the distance of the boreholes. This reduces their number and the related expense for the contractor substantially.

The trials and measurements of the UPEX® 745 P2I could proof a higher sensitivity when compared to the conventional magnetic borehole inspection method.

Surface detection

For active from-surface inspection two different transmitter configurations are available :

1. a static transmitter loop covering a grid area of 20 m x 20 m or 40 m x 40 m. A handheld receiver probe is carried within this grid
2. an integrated detection system consisting of a 1 m x 1 m handheld transmitter which is combined with the mobile receiver unit

Receivers, probes and loops of various sizes are available (260 mm, 450 mm, 1 m x 1 m, 2 m x 1 m).

The choice of components allows to optimise the system for different detection tasks. The equipment cost is low when compared to the increase in productivity, the long life cycle and versatility of the detection system.



TECHNICAL DATA

Power supply :
Rechargeable battery 2x 12V/ 7,2 Ah operation time approx. 2.5 h

Dimensions :
Transmitter loop, 20 m x 20 m, on 1 reel approx. 500 mm x 380 mm x 300 mm
Transmitter loop, 40 m x 40 m on 2 reels of: approx. 500 mm x 380 mm x 300 mm
Standard borehole probe approx. 800 mm x 40 mm

Weight :
Transmitter loop, 20 m x 20 m, on 1 reel approx. 18.5 kg
Transmitter loop, 40 m x 40 m, on 2 reels approx. 18.5 kg (each)
Standard borehole probe approx. 1.3 kg

