

NAVIGATE Tunnelling

The Navigation System SLS-Microtunnelling LT is a Laser Total Station system which continuously determines the exact position of the Tunnel Boring Machine and displays the deviations with respect to the DTA immediately on the monitor at the operator's place.

SLS-Microtunnelling LT

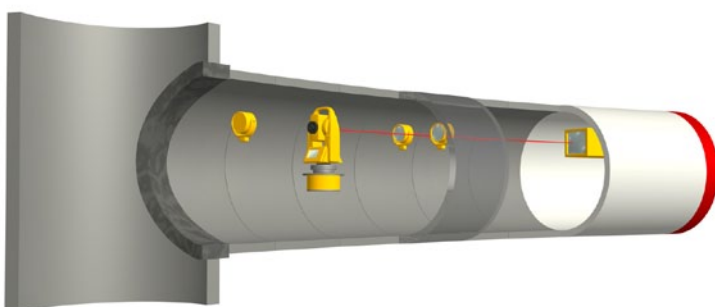
The SLS-Microtunnelling LT System offers considerable advantages especially at long distance and curved advances. As the complete hardware is installed in the front part of the tunnel (first 100m) refraction will not influence the measurements and calculations for the vertical TBM position.

The system measurements are done during the advance process and don't cause any interrupt. The control measurements for system adjustment are done in intervals of 60m -120m, depending on the alignments. This minimizes the maintenance effort of a surveyor during the whole working process.

The high content of information of the displayed data guarantees an optimal control of the machine position in order to hold the deviations from the designed tunnel axis to a minimum.

SLS-Microtunnelling

LT schematic



SLS-Microtunnelling LT

The high precision and reduction of down times makes this system extreme efficient especially for quick advances.

Advantages

- Optimal control by continuous monitoring of machine movements
- Fast action possible as deviations are quickly recognized
- Minimized effort for control measurements
- No advance interrupts at system measurements
- High advance output power
- Modular expandable by further sensor and navigation systems
- Installing JC Pipe: Reliable real time calculation of max. allowed advance force
- Identification of problems in the tunnel alignment
- Quality assurance due to real time acquisition, analyzing and alarming

Features

- Field of applications: Microtunnelling, for long distance and curved advance from DN1200
- Continuous graphical and numerical display of deviations and tendencies
- Determination of position independent of refraction or drift
- Connection to remote control and internet visualization
- PLC-connection to various types/producers
- All-over reporting according to ATV, customized expandable
- Stand-Alone-System for all types of machine

Options

- Automatic Bentonit Lubrication System ABLS
- Gap Measurement System GMS
- Information System IRIS.microtunnel
- Camera Monitoring System MoVi
- Online Monitoring Pipe Static (JCPipe)
- Telephone Communication System TCS

