

# NAVIGATE Tunnelling

The SLS Microtunnelling HL is a navigation system for Microtunnelling which uses an electronic hydro level system to determine the vertical deviations and tendencies from the designed tunnel axis without any refraction.

## SLS-Microtunnelling HL

The use of the electronic hydro level system for height determination of the TBM enables a precise vertical navigation independently from tunnel length and refraction influences.

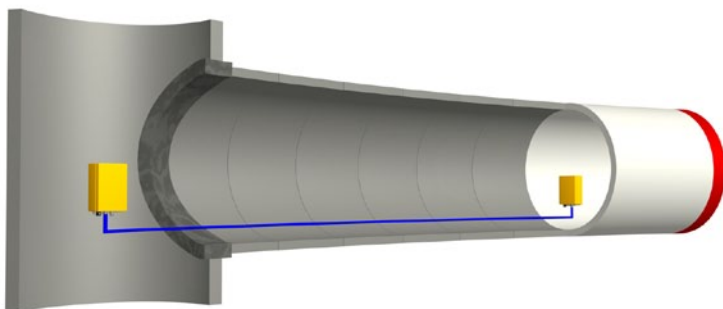
The system provides the operator with a continuous display of vertical deviations to the designed tunnel axis as well the roll and pitch and the vertical tendency of the machine.

The vertical deviations from the reference alignment are kept to a minimum as the necessary steering movements can be initiated in sufficient time.

The high information content during steering process, the all-over and permanent storage of all geometrical advance data for a later documentation as well the high efficiency due to only few advance interrupts are the decisive advantages of this system.

*SLS-Microtunnelling*

*HL schematic*



# SLS-Microtunnelling HL

Robust, tunnel-suited hardware and user friendly software guarantee a fast and easy familiarization und usage of the system.

## Features

- Field of applications: Microtunnelling, for all diameters
- High precise and continuous determination of vertical position
- Flexible system alignment independent from "line of sight"
- Combined with a laser system: redundant dimensioning which means increase of precision
- Continuous display and storage of all data
- All-over reporting according to ATV, customized expandable
- Connection to remote control and internet visualization
- PLC-connection to various types/producers
- Stand-Alone-System for all types of machine

## Advantages

- Optimal control by continuous monitoring of machine movements
- Fast action possible as deviations are quickly recognized
- High precision by redundancies
- High advance output power
- Modular expandable by further sensor and navigation systems

## Options

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

