

Axis3D ETU

Field solutions for geometry-based stakeout and control measurements



Flexible measurements: Stakeout and control wherever it's needed – with the design geometry loaded on-board the total station.

Short measuring times: Automatic positioning to target by iterating minimizes setout and scanning time.

Intuitive user interface: Workflow optimized for fieldwork – developed by surveyors for surveyors.

No additional hardware: On-board software for Leica Geosystems total stations TPS1200, TM/TS30 and Viva.

Setup and Orientation



The total station position is calculated using standard Leica functions. Observations are then made to reference points for post-processing of position, height and orientation of the instrument. **Assigning point IDs** and positioning to targets can be **automated**.

Stakeout



The design geometry is exported from Axis3D COS office software and loaded onto the total station. On site, points are **set out relative to the design geometry** with Axis3D ETU using stationing, height, or offset values from centerline, profile arc length, or radial distance from nominal profile. Furthermore, it is possible to stake out the **intersection point** of any given 3D line with the **design geometry**.

Controls



For **as-built checks** coordinates of single points can be viewed directly on site, either in reference to the center line or to the nominal profile. The automatic **linescan of as-built profiles** – with the added option of omitting certain areas such as ventilation ducts – enables quick, comprehensive control. Each scan point is positioned **automatically by an iteration**, to find the correct chainage and arc-length.

System Information

Hardware

- Leica Geosystems TPS1200 total station
- Leica Geosystems TM/TS30 total station
- Leica Geosystems Viva total station
- Leica Geosystems Nova total station

Software

- Axis3D ETU on-board software for Leica Geosystems TPS1200, TM/TS30, Viva and Nova total stations

Related Products

- Axis3D COS - Construction Surveying
- Axis3D NET - Network Adjustment
- Axis3D SET - Sets of angles

Axis3D ETU Functionality

General

- Axis3D ETU operates with the entire design geometry, including profile enlargements, loaded onto the total station (exported from *Axis3D COS*). Pre-calculating stakeout points is unnecessary
- Making use of Leica Viva and Nova Imaging functionality (coming soon)
- Save all program settings
- Measurement data and coordinates stored in ASCII files in Leica GSI8 or GSI16 format
- Point coding consistent with other Axis3D products
- Optional: logging of all activities on the total station
- Program continues after power fail

Reference Points

- Unlimited number of reference points
- One- or two-face measurements
- Automatic detection of point IDs for manual measurements
- Automatic positioning after entering point ID
- Automatic target recognition measurement using pre-defined target heights and reflector constants
- All target points stored for repeat measurements

Point Stakeout

- 1D, 2D, 3D stakeout relative to center line (chainage, horizontal and vertical offset)
- 1D, 2D, 3D stakeout relative to nominal profile (chainage, arc length, radial offset)
- Automatic point IDs
- Measure to prisms or reflector-less
- Optional: automated iteration to target
- Automated repetition of reference point readings

3D Line Stakeout

- Stakeout intersection points of 3D lines
- Automatic point IDs
- Measure to prisms or reflector-less
- Optional: automated iteration to target
- Automated repetition of reference point readings

Profile Scan

- Profile scan within a given chainage range
- Freely define profile intervals and point spacing in profile
- User defined scan areas within a profile
- Automatic point IDs
- Reflector-less measurement
- Optional: automated iteration to target
- Automated repetition of reference point readings

Point Checks

- Check relative to center line (chainage, horizontal and vertical offset)
- Check relative to nominal profile (chainage, arc length, radial offset)
- Automatic point IDs
- Measure to prisms or reflector-less
- Optional: automated iteration to target
- Automated repetition of reference point readings

Applications



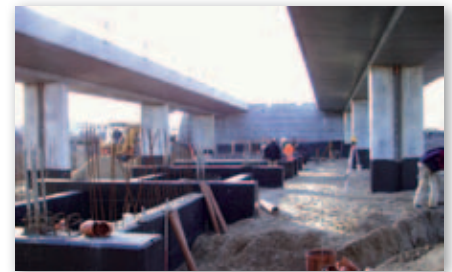
Tunneling

Stakeout and control of center lines, steel arches, lining, profile enlargements, niches, side-ways, formwork, etc.



Road and Rail Construction

Stakeout and control of center lines, prefabricated slabs, side-ways, plane layer, dams, cuts, installations, etc.



Building Construction

Stakeout and control of center lines, foundations, abutments, formwork, boreholes, retaining walls, etc.

Contact Information

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