TRACK SURVEY TROLLEY

RAILWAY INFRASTRUCTURE MONITORING

Setup

The system is comprised a trolley, a profiler and a ruggedised laptop.

The trolley is transported to the survey location in pieces then assembled on site and placed on the track. The laptop and profiler are mounted onto the trolley and secured.

Optionally, a Total Station can be used to supplement the system for full-3D positioning of running rails using the attached prism.

Aside from potential survey control for a total station, the system requires no permanent installations or targets to complete a track geometry survey.

Operation

A surveyor pushes the trolley along the rail as the system takes measurements at predefined intervals depending on the sensitivity of the survey required by the specification. The distance travelled with the trolley is measured by the system's built-in odometer.

If the survey requires clearance information, the profiler takes measurements of the surrounding track infrastructure at each interval, providing horizontal and vertical distance from the running rails.

The laptop is used to manage the survey process, allowing the surveyor to track progress, change settings and analyse the data collected.

Applications

Track survey trolleys are designed for taking detailed measurements of rail infrastructure in 2D and 3D.
They can read geometric values of track gauge, cant, twist, and clearance from trackside infrastructure.

Suitable for above ground and underground rail surveys.

Typical applications include:

- Monitoring of track geometry and deformation.

- Clearance analysis for track and surrounding infrastructure.

- Surveying track geometry pre- and post-tamping.

- As-built surveys of railway lines.

- Compliance checks of lineside installations

Specifications

Range -

Gauge:	-25 to +65mm
Profiler:	0.3m-30m
Cant:	+/- 260mm

Accuracy -

Gauge:	+/- 0.3mm
Coordinates:	+/- 1mm
Cant:	+/- 0.5mm

Weight:	30kg

Key Advantages

Easy Reporting:
Automatic report generation including profile plots with clearance distances, coordinate lists and gauging information.

Data Management:
Associated software offers complete management of the survey data collected, allowing real-time visualisation of data.

Third Party Compatibility:
Established interfaces to third party clearance and design applications like DXF, ASCII, SC0.