

Track Geometry Trolley (P7100)

Track Control Solutions



Pandrol's Track Geometry Trolley (P7100) is an accurate device for recording track gauge, cant, twist, distance and GPS positioning.

Track geometry data is transmitted from the measuring device via Wi-Fi to a tablet running Windows that displays results in real time. The data is saved as a .csv file that can be opened in MS Excel and data and fault reports can be transferred from the tablet via a USB drive or email.

The device is compact and can be disassembled for transportation in two protective storage bags. It can be assembled by one operator and is pushed along the track at walking speed.

→ TECHNICAL FEATURES

Non-conductive

Plastic wheels and a non-conductive insulation block between the wheel arm and contact bearings ensure that the trolley is insulated and does not create electrical contact between the two running rails.

Tablet and software

The measuring device is supplied with a Panasonic tablet running a Windows operating system and track geometry software.

Data and reports

Track geometry data is saved as a .csv file that can be opened in MS Excel. Saved data and fault reports can be transferred from the tablet using a USB drive or email.

Rechargeable batteries

The Track Geometry Trolley has two rechargeable batteries, accessed from the top of the device.

Disassembly

The Track Geometry Trolley breaks down into five separate parts that fit in two storage bags for ease of transportation.

Portability

The trolley weighs 25kg, so should only be lifted by one person if they feel able to do so. Otherwise, the trolley should be disassembled and carried by two operators. Plastic lifting handles increase portability.

→ ADVANTAGES

- The Track Geometry Trolley is multipurpose, allowing the operator to record track gauge, cant, twist, distance and GPS positioning, as well as flagging defects whilst recording.
- The device provides live data on site, saving time for the user and enabling the rapid identification of problem areas.
- The equipment is easy to set up and use, reducing time on track and contributing to the user's safety.
- A GPS receiver ensures future recordings can be conducted at the same location, enabling accurate pre- and post-maintenance analysis and preventative maintenance of known problem sites.
- The device is user-friendly and operators only need limited training compared to when using traditional methods.
- The Track Geometry Trolley breaks down into parts, is fitted with handles and comes with bags, making it easy to move and transport.



→ COMPONENTS

1. Sprung half of trolley
2. Fixed half of trolley
3. Handle
4. Panasonic tablet
5. Batteries
6. On button
7. Lock handle
8. Gauge retraction handle
9. Sensor compartment

→ SPECIFICATIONS

Physical specification	
Weight	25kg
Size of gauge on track	Length: 1610mm to 1700mm Height: 1000mm Width: 720mm
Operating temperature	-10°C to +50°C
Environmental rating	IP65 assembled
Operating system	Windows 64 bit

Track gauge results



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Measurement specification

Gauge	Range: -25/+65mm (on nominal gauge 1435mm) Accuracy: +/-1mm Resolution: 0.1mm
Super-elevation	Range: +/-250mm Accuracy: +/-1mm Resolution: 0.1mm
Twist	Range: +/-250mm Accuracy: +/-1mm Resolution: 0.1mm
Distance	Maximum limit on the number of measurements per recording for gauge, SE and twist: 50,000 Recording increment: 0.1, 0.2, 0.25, 0.5, 1.0m Accuracy: +/-1% Resolution: 10mm
GPS	Accuracy: +/-4m (in sunny, clear sky conditions)

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