DESIGN MADE EASY

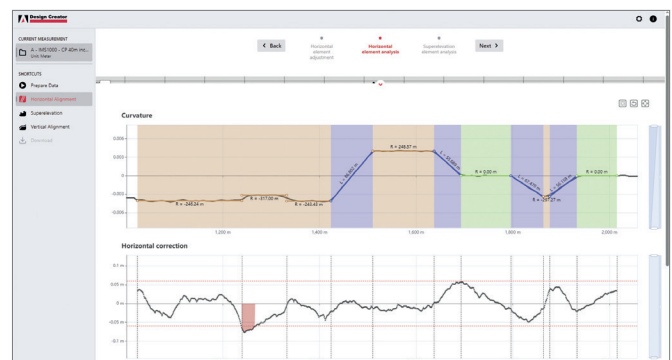**Precision meets simplicity in track alignment design**

Amberg Design Creator transforms track geometry survey data into a precise, best-fit alignment. By automating alignment calculations, it fits straights, arcs, and transition curves to real track conditions, creating an optimal layout. Its intuitive interface and streamlined workflow enable engineers to progress smoothly from initial measurements to final alignment, refining adjustments with immediate quality feedback to ensure high accuracy and reliability. From defining horizontal and vertical alignments to configuring superelevation, Amberg Design Creator equips engineers with the essential tools for precision at every stage of the project. This user-friendly software streamlines the alignment creation process, delivering clarity, accuracy, and confidence for successful project execution and stakeholder collaboration.
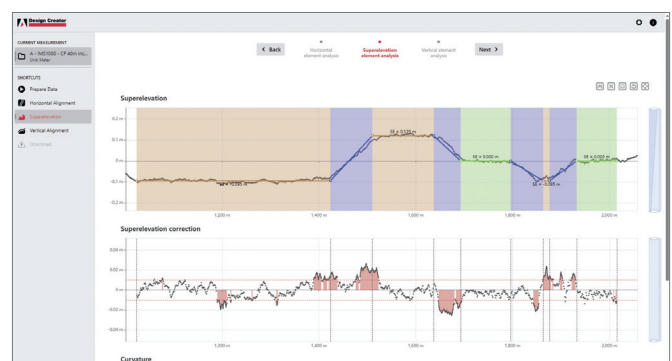
Use Cases

- **Tamping Without Design Information:** Generates a design alignment in areas lacking an official one.
- **Dynamic Clearance Analysis:** Provides essential input for clearance checks and adjustments in the absence of a design alignment.
- **Track Maintenance and Realignment:** Simplifies design checks and recalculations to extend track life.
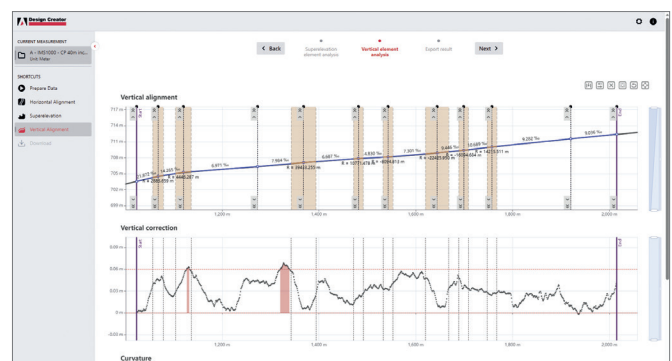
Key Features and Benefits

- **Best-Fit Alignment with User Control:**
  Creates a precise, best-fit horizontal, vertical, and superelevation alignment from survey data, with adjustable elements.
- **Real-Time Adjustment Feedback:**
  Instantly displays alignment corrections, including vertical and superelevation adjustments.
- **Flexible Design Thresholds:**
  Allows user-defined thresholds and minimal corrections at start/end points for precise control.
- **Guided Workflow with Visual Support:**
  Intuitive graphical interface and guided workflow make adjustments simple and precise.

Horizontal alignment analysis

Superelevation alignment analysis

Vertical alignment analysis

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AMBERG TECHNOLOGIES

TECHNICAL DATA

User interface [1]	
Languages	English, French, German, Spanish, Italian
Units	Meter Feet (International) Feet (US)

Import formats [1]	
ASCII	Supported
JSON	Supported
From Amberg Rail	Supported
From Amberg TRACK PRO	Supported

Horizontal alignment	
Definition and analysis	
Horizontal elements	Straights Arcs Clothoids
Best-fit horizontal alignment	Automatically calculated with user-adjustable options
Horizontal corrections	Supported
User-defined thresholds	Supported
Map view	Supported
Constraints	
Length	Element detection using user-defined minimum length
Radius	Straight element detection using user-defined radius
Alignment ends	User-defined tolerance between the measurement and design at the start and end of the alignment

Superelevation alignment	
Superelevation elements	Constant
Linear ramp	Horizontal, vertical
Best-fit superelevation alignment	Automatically calculated with user-adjustable options
Superelevation corrections	Supported

Vertical alignment	
Definition and analysis	
Vertical elements	Kinks Kinks with rounding (arc)
Best-fit vertical alignment	Automatically calculated with user-adjustable options
Vertical corrections	Supported
User-defined thresholds	Supported
Constraints	
Alignment ends	User-defined tolerance between the measurement and design at the start and end of the alignment

Export formats [1]	
LandXML	Supported
Overall view	Charts of overall deformations, main table view

Licensing options [2]	
Subscriptions	1-year 3-year

[1] Additional interfaces and formats are available upon request.

[2] No Maintenance & Service contract required. Software updates and support are included during the subscription period.

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