

MiniProf ^{BT} Wheel

The MiniProf BT Wheel system is a full contact measuring system for fast and high-accuracy cross-sectional wheel profile measurements. It is a lightweight hand held tool, which can be used for planned maintenance, wear prediction, trending analyses and much more. Magnetically attached to the backside of the flange, a MiniProf Wheel system measures a wheel profile in less than five seconds and a complete railroad car in only few minutes. Measurements are performed easily via the free Android app MiniProf Criterion and calculations of wear parameters are provided instantly. Full access to numerous additional calculations and data handling opportunities are included in the powerful Envision software for laptop and PC

TECHNICAL DATA

Technology:

Full contact w. magnetic knife-shaped probe wheel for direct contact during the complete measuring process.

Product ID:

MP-160 (100 mm backplate, wheel mini)
MP-162 (250 mm backplate, standard)
MP-164 (400 mm backplate, diameter)

Profile accuracy:

Better than: $\pm 9,0 \mu\text{m}$
Repeatability: $\pm 2,5 \mu\text{m}$

Diameter accuracy:

Based on MP-164 and the versine measuring principle*

800 mm wheel diameter: $30 \mu\text{m}$
1000 mm wheel diameter: $50 \mu\text{m}$
1200 mm wheel diameter: $80 \mu\text{m}$

Measuring speed:

< 5 seconds per profile

Weight/dimensions:

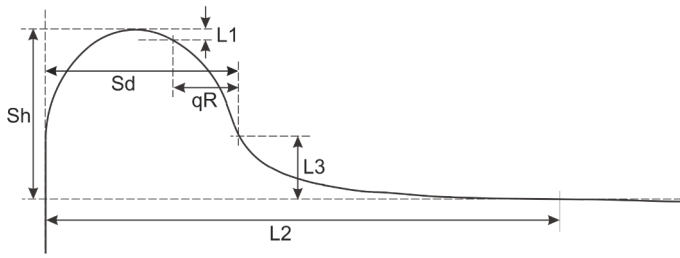
MP-160:	0,7 kg
Transport case:	2,5 kg (400 x 300 x 190 mm)
MP-162:	1,0 kg
Transport case:	2,5 kg (400 x 300 x 190 mm)
MP-164:	1,4 kg
Transport case:	4,0 kg (500 x 400 x 190 mm)

Scope of delivery:

- MiniProf Wheel unit
- Full Envision software package, 5 installations, free software updates
- MiniProf Criterion for Android smart phone data collection
- MiniProf cable & charger
- Rugged and waterproof transport case IP67 with room for MP and accessories
- Quick guide, tutorial videos and free hotline support
- 2 years standard factory warranty with option to prolong to 5 years in total

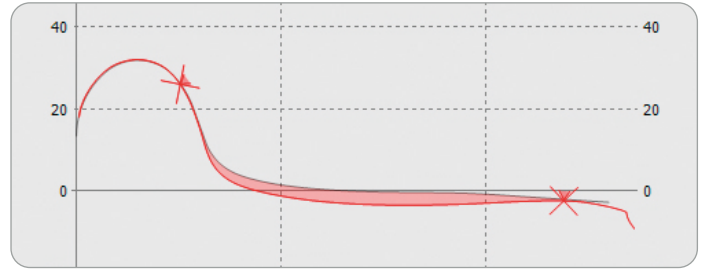
MiniProf - Much more than a measurement!

A world of data handling opportunities available in the full MiniProf Envision software package



Wheel wear calculations

The S_d , Sh and qR values are calculated instantly and numerous additional calculations and alignments for wheels are available in the versatile and flexible Envision software package.



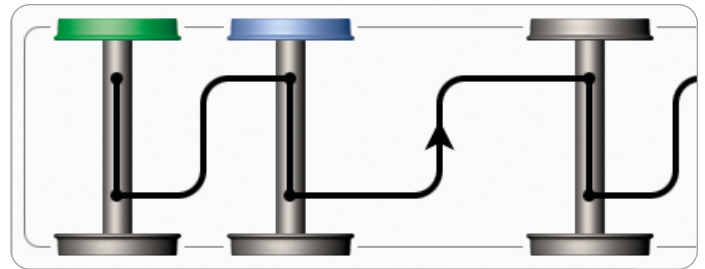
Wheel analysis

The MiniProf Envision software can visualize and calculate residuals and areas automatically. Measurements can be compared in multiple ways and easily exported to various formats. MiniProf Envision offers you a powerful wheel analysis tool as well as user friendly measuring software.



Reprofiling

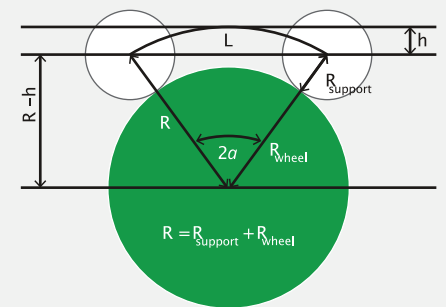
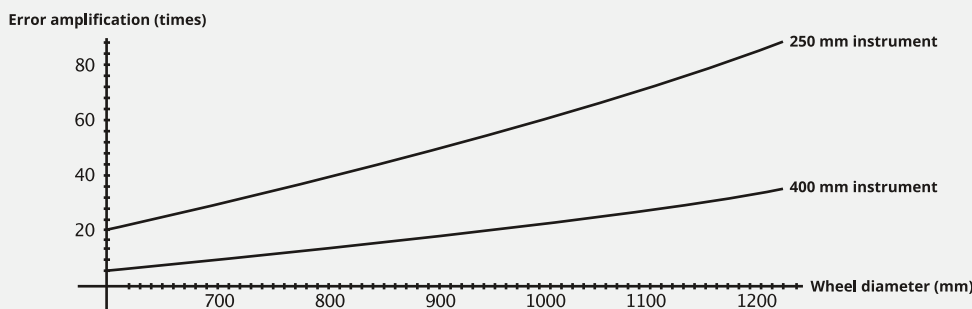
The MiniProf BT Wheel system is ideal to use before and after reprofiling of the wheels to determine when to reprofile and how much material to take off during the reprofiling process. This leads to precise reprofiling and improved lifetime of the rolling stock due to the unmatched high accuracy of the MiniProf system.



Measuring scheme

When measuring multiple profiles, the MiniProf BT measuring scheme is a very strong tool for clear identification of each profile in advance and for simplifying and reducing the measuring process even further.

* Diameter accuracy according to the Versine Principle



$$R_{\text{wheel}} = \frac{(0.5L)^2 + h^2}{2h} - R_{\text{support}}$$