

MiniProf ^{BT} TwinHead

MiniProf BT TwinHead is a full contact measuring system for fast and high-accuracy cross-sectional profile measurements of track and rolling stock. A MiniProf BT TwinHead system measures both left and right profile together which makes it possible to obtain a highly accurate relationship between the two profiles. This is especially important in analyzing running characteristics using for example equivalent conicity studies. The MiniProf BT TwinHead systems are available for rail and wheel profile measurements. 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 with a magnetic knife-shaped probe wheel for direct contact during the complete measuring process.

Product ID:

MP-180 (MiniProf BT TwinHead for Wheels)

MP-280 (MiniProf BT TwinHead for Rails)

Profile accuracy:

Better than: $\pm 11,0 \mu\text{m}$

Repeatability: $\pm 2,5 \mu\text{m}$

Gauge: $\leq 100 \mu\text{m}$

Measuring speed:

< 5 seconds per profile

Weight/dimensions:

MP-180: 2,7 kg

MP-280: 1,9 kg

Transport case: 4,0 kg (500 x 400 x 190 mm)

Operating temperature:

-15°C to +50°C

Scope of delivery:

- MiniProf BT TwinHead Rail or Wheel unit
- Full Envision software package, 5 installations, free software updates. Measuring and analysis supported.
- MiniProf cable & charger
- Rugged transport case with room for MP and accessories
- User 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!

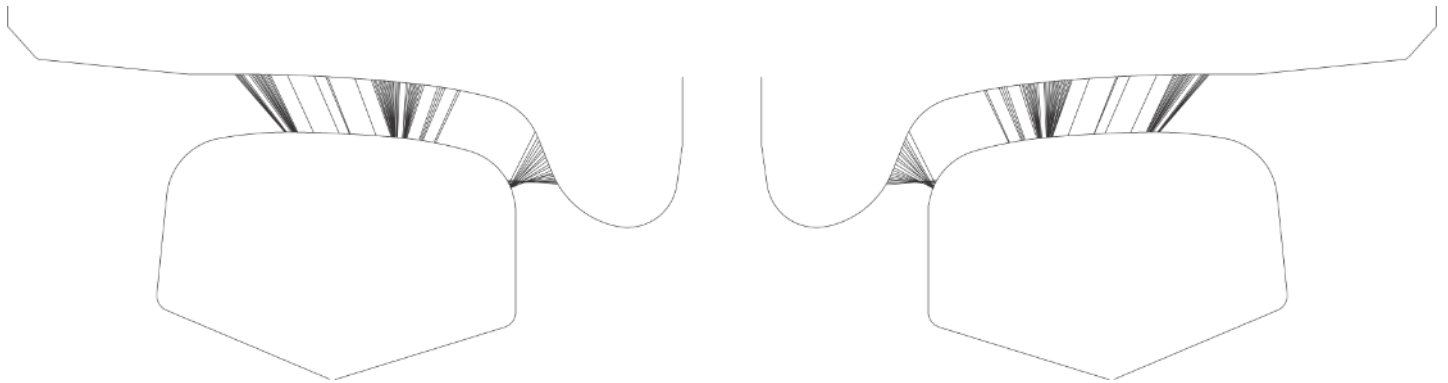
A world of data handling opportunities available in the full MiniProf Envision software package

EQUIVALENT CONICITY

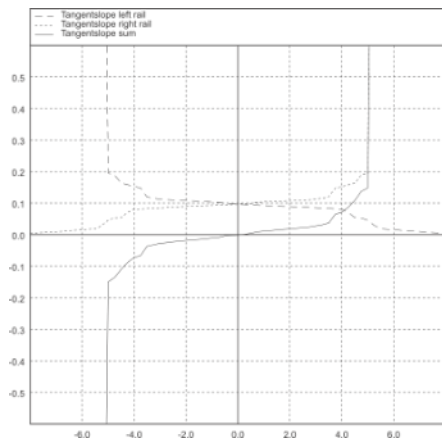
When investigating dynamic interaction between vehicle and track, the equivalent conicity is a very useful parameter. The conicity depends on the actual shape of the railhead and wheel profile, including any wear, gauge and rail inclination. During this analysis, it is practical that the profiles are given in a common coordinate system.

The results of the equivalent conicity calculation are:

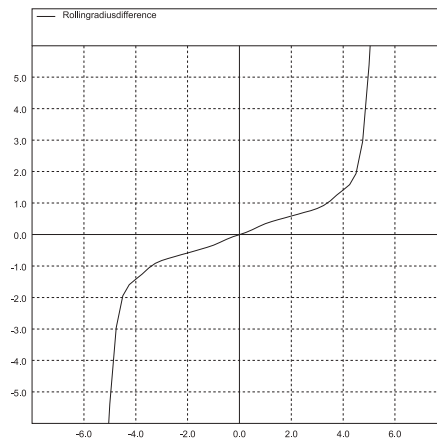
Contact points



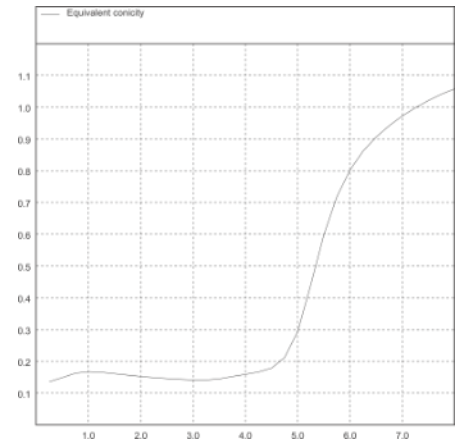
Contact angles



Rolling radius difference



Equivalent Conicity



The Equivalent Conicity can be calculated by one of the four methods available in the software which are based upon the UIC 519 standard.