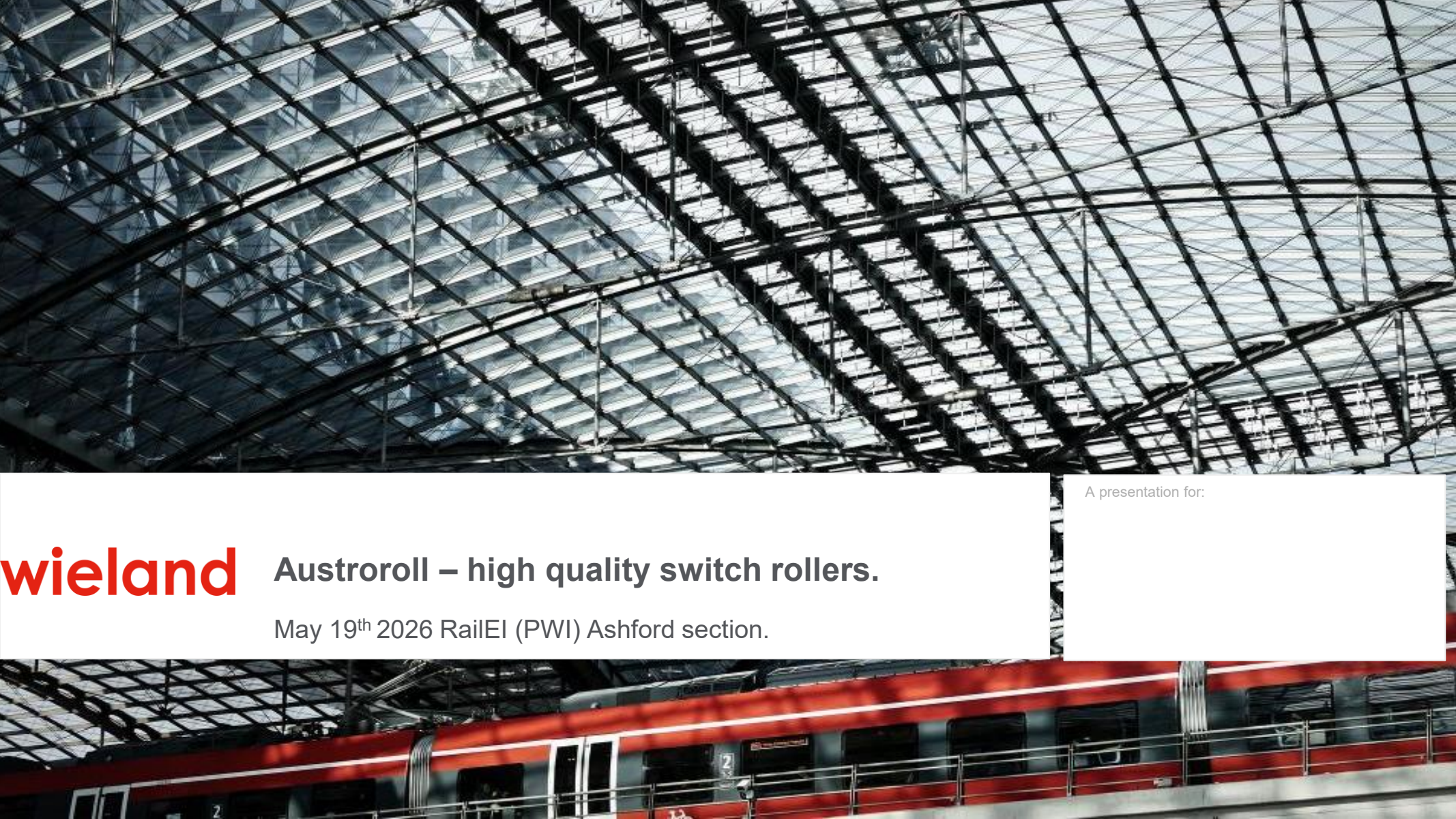




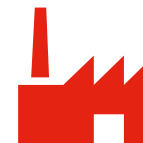
wieland

Austroroll – high quality switch rollers.

May 19th 2026 RailEI (PWI) Ashford section.

A presentation for:

Broad product portfolio to meet diverse customer needs



Strip & sheet



Rods, wires & tubes



High performance tubes & heat transfer solutions



Slide bearings & system components



The traditional way of slide chair lubrication



Lubricant on and beside the slide chairs...

- Expensive
- Environmentally unfriendly
- High Risk maintenance tasks
- Inefficient
- Rising throwing forces
- Inconstant throwing forces

AUSTROROLL®

AUSTROROLL® a trademark of Wieland Austria

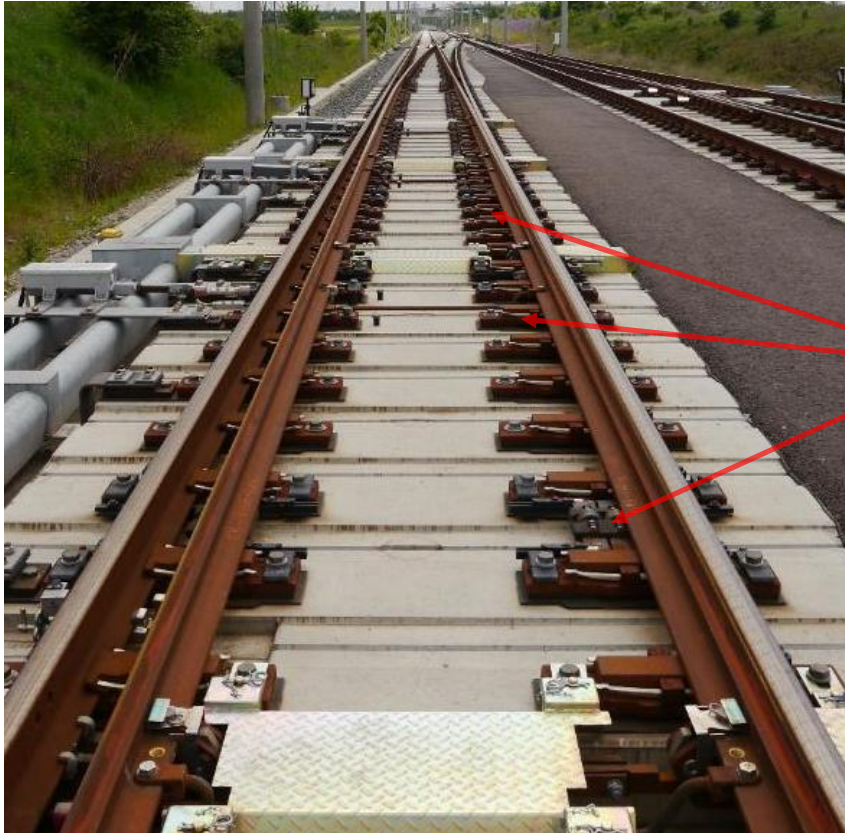


- **Durable & High quality:**
Made-in-Austria
- **Since 1994:**
continuous improvement
- **> 250,000 plus**
successful installations
- **Globally available**
Partner in more than 20
countries
- **Economically friendly:**
ECI certification





Rolling instead of sliding - 24 hours a day / 7 days a week

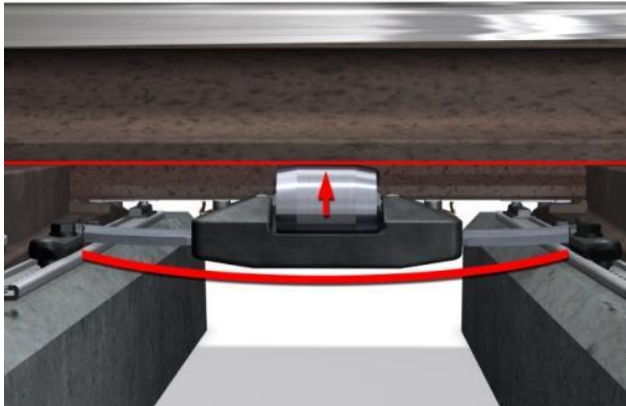


- 100% lubrication free
- maintenance free
- extreme durable and economically



...with a worldwide unique functional concept

- Permanent contact between the roller – switch blade base in combination with a large roller diameter and elastic roller suspensions
- Immediate lifting of the switch
 - Minimizes static friction and eliminates sliding friction
- Closed switch is fixed to the stock rail or rail blocks
- Supports the correct switch position also for turnouts with a cant



**Only
system
worldwide
with
permanently
elastic
suspension!**

Austroroll®



How does it work?

1. In the closed position the switch blade rests on the slide chair with preload from the roller. The roller preload with roller the angle of the curve provide a lateral force towards the switch/stock.
2. At the start of the switching opening the blade rolls up onto the roller and is lifted off the slide chair. This means there is no friction in the starting of the process.



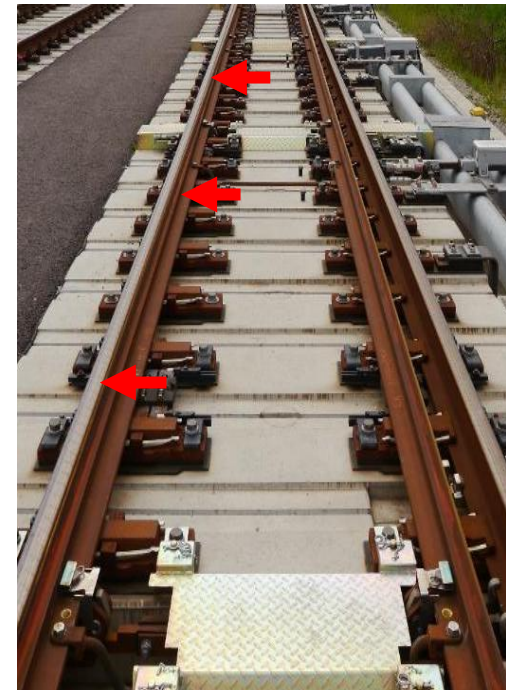
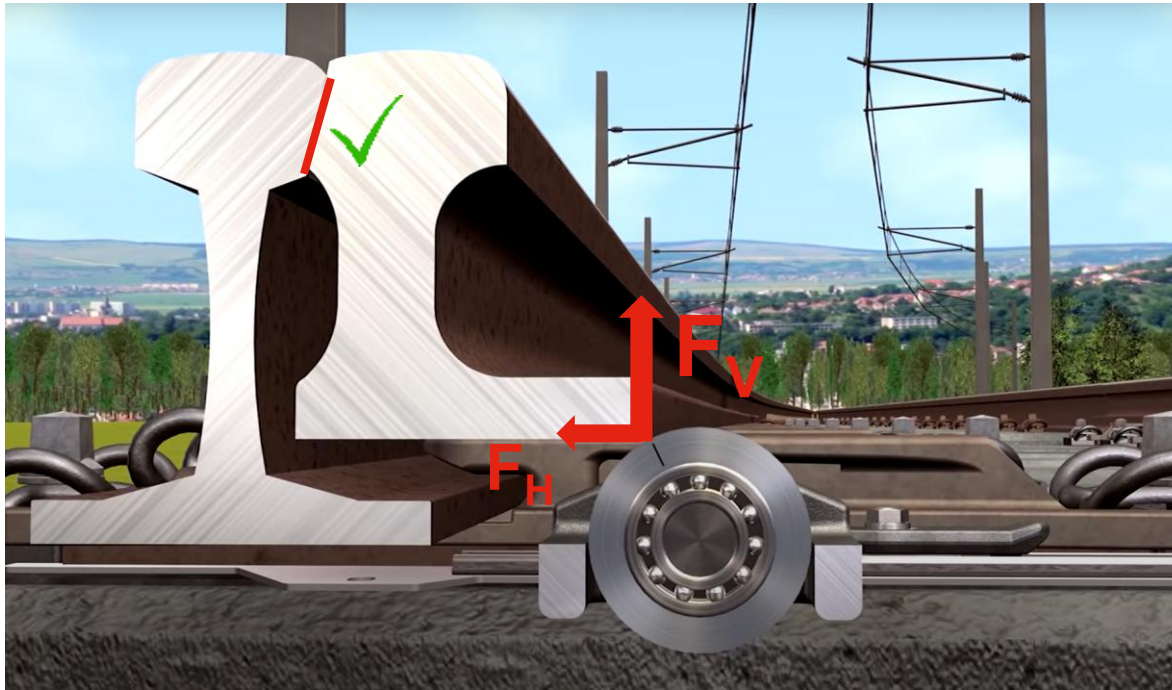
3. The switch blade rolls to its final open position on the roller with a minimum of friction and rests on roller.
4. When it is time to reset the points, the blade rolls back to its original position on the slide chair and is returned to the desired final position aided by the roller lateral force, described in point 1.





Benefit of the „preloaded“ Austroroll system

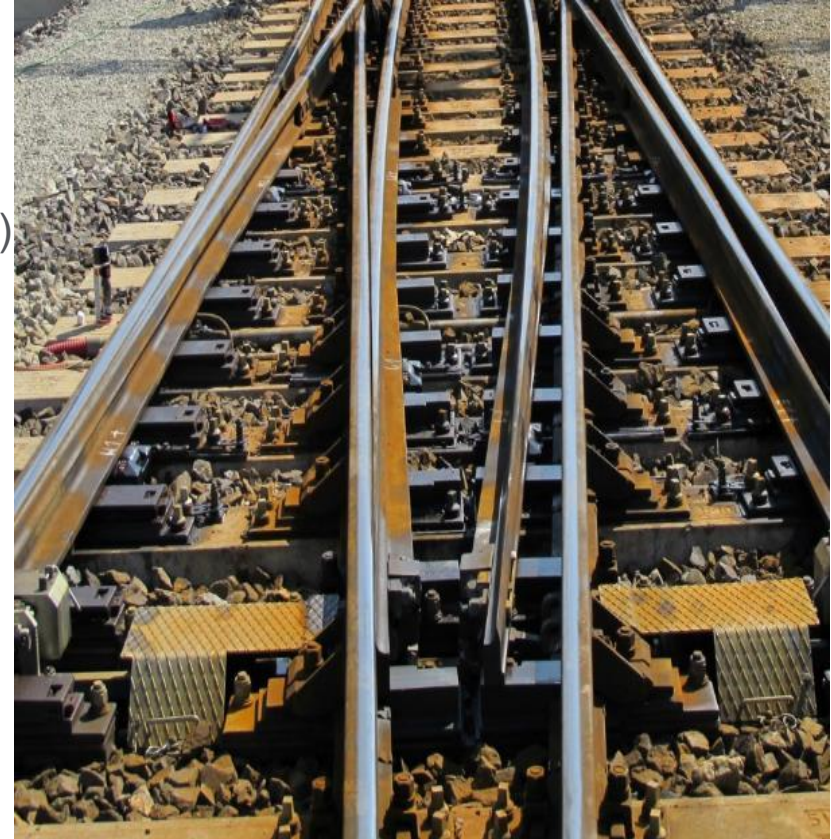
- If Austroroll is installed with the recommended settings, with 2 mm pretension, the vertical force F_v is around 2.0 kN and the horizontal force F_H around 0.8 kN per roller unit.
- This actively presses the switch blade against the stock rail. The vertical force does not lift the closed switch blade; it is only lifted when the switch blade is rolled up.





Usability

- New turnouts
- Retrofit of already existing systems
- All types of sleepers (timber, composite, concrete, steel)
- Slab track and resilient track e.g. Delkor.
- All rail/switch types
 - 60E1/2 56E1 and basically all FB sections.
 - AREMA
 - 95lb bullhead
- Used extensively on Highspeed lines.
- No limit to type of point or the track gauge





Your benefits

- **Cost savings** and/or **elimination** of
 - ✓ **Maintenance**
 - ✓ **Lubrication**
 - ✓ **On-track personnel**
- Low installation costs
- In track install with no signaling/iron work intervention. Over night ROR install.
- Short payback period (3 - 4 years)
- Increase in track availability
- Protection of the point machine
- Long service life, functioning at end of switch life.

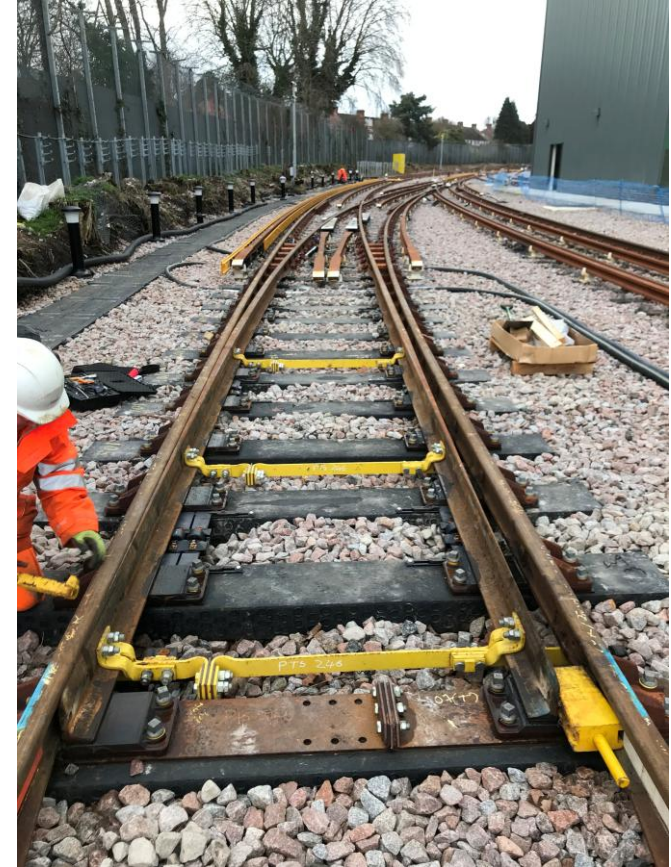


Fewer malfunctions = fewer delays = higher passenger satisfaction!



UK; some solved solutions, installed and performing.

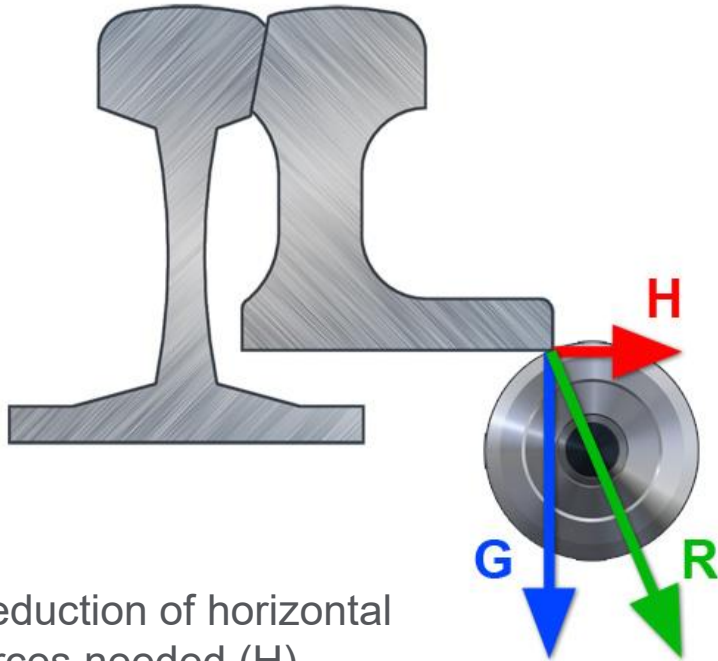
- NR approval being updated for recent roller upgrades and Kisby plate.
- Test for undertaken LU approvals: F BH switch with hand-spring point made operable with three pairs of rollers and no back drive. In operation on Heritage railway.
- Acton yard LU: Hand points no back drive, C switches made compliant, removed flange back closure issue with two set of rollers.
- Entrance/King spring points E, Midland gateway: failures stopped and additional inspections/lubrication removed.
- DLR Canary Wharf: Reoccurring point failure issue removed.
- DLR: Design for rollers on resilient track form with no signals or iron works intrusion.





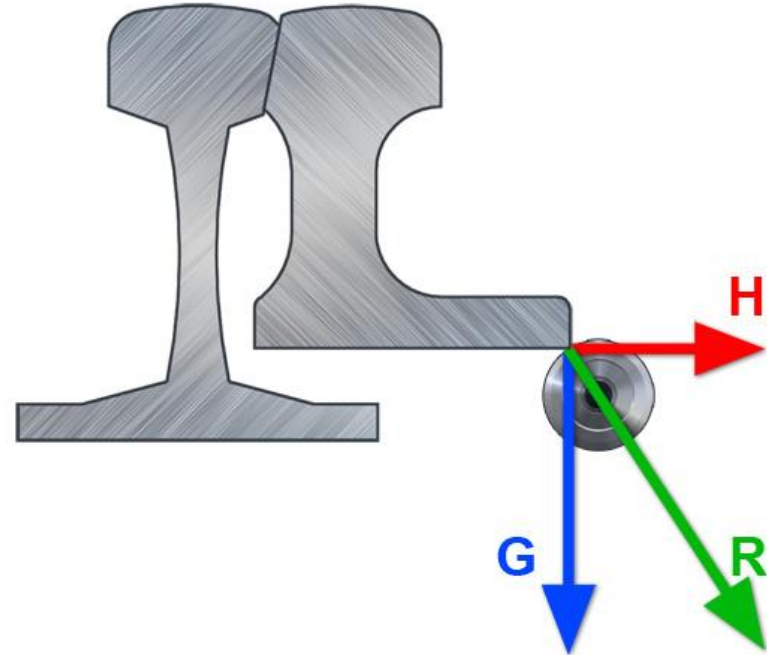
The small (big) difference

Large roller diameter at AUSTROROLL®



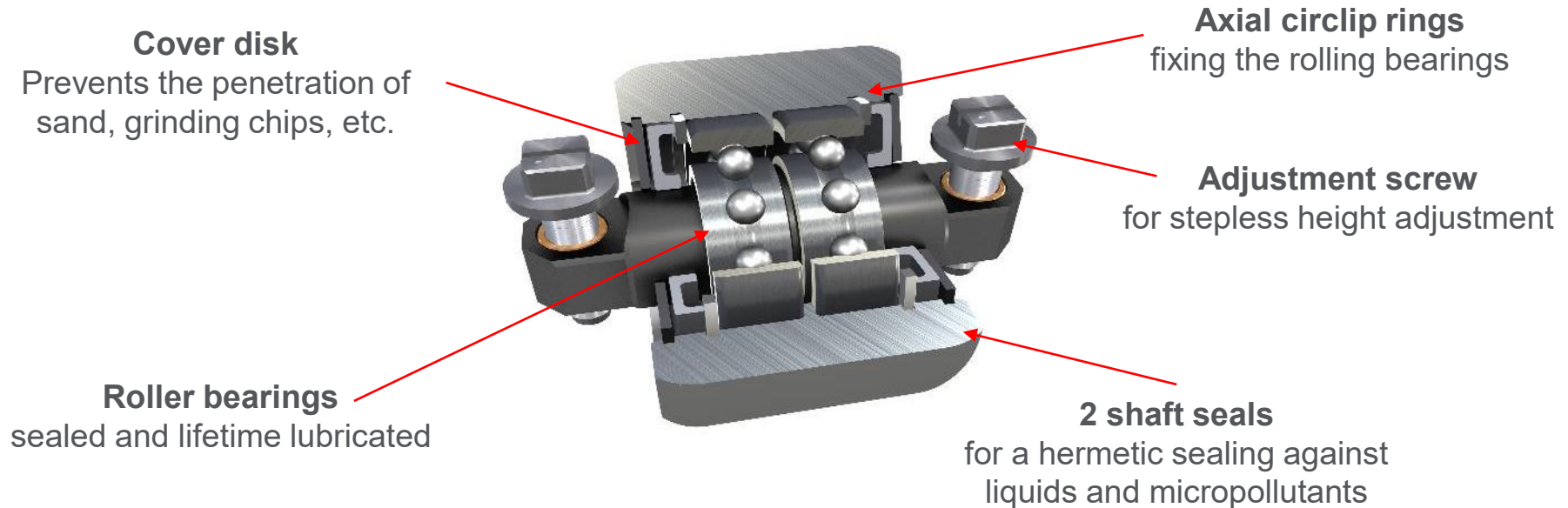
Reduction of horizontal forces needed (H)

Small roller diameter on other systems



Arrangement of the roller in the space between sleeper - Why?

- The arrangement of the Austroroll® roller in the sleeper space, allows the use of a comparatively large roller diameter - Ø 76 mm
 - **Easy rolling onto** the switch blade
 - **Fully sealed** Mining bearing standard.
 - **Maintenance-free** by using a hermetic 3-level sealing





Tamping of points

- The system has no effect on the tamping operation.
- No missed beds or manual packing required.
- The Austroroll® rollers compatible with milling, grinding or welding operations.
- No protection plates or similar are required
- The open switch blade completely covers the roller

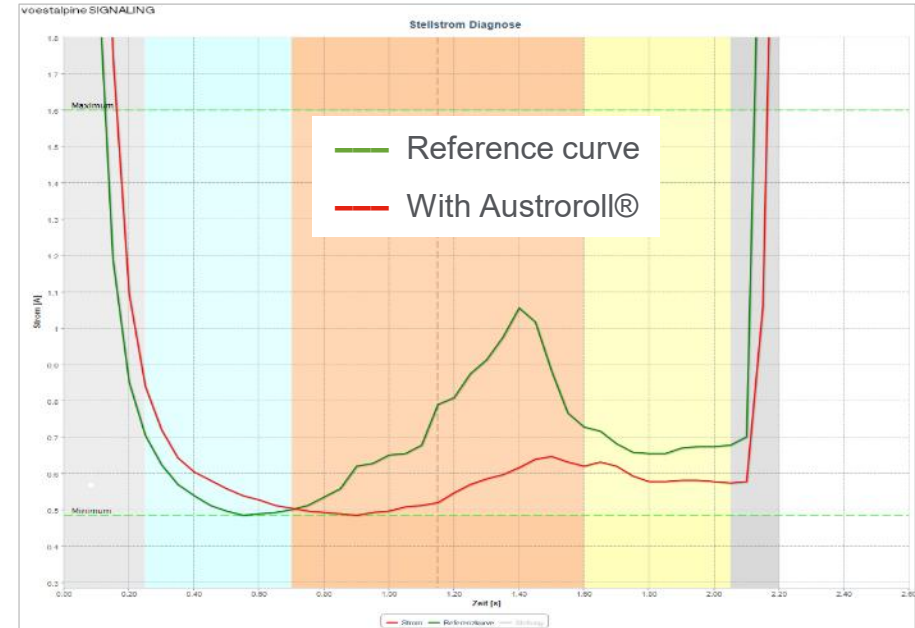
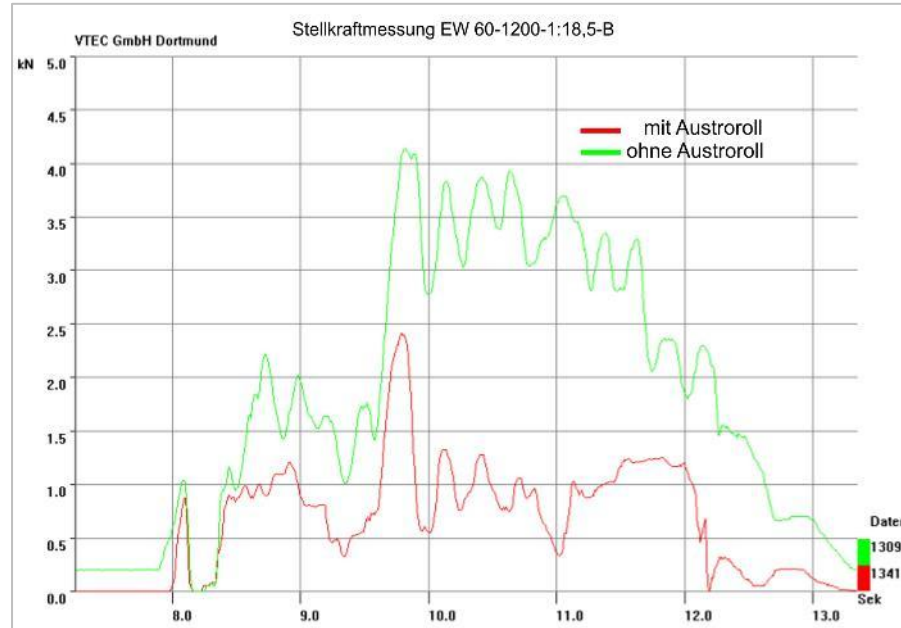


Confirmed by **Plasser & Theurer, ÖBB, Deutsche Bahn AG** and many others

Benefits for the customer



- Reduction of the throwing forces
- Protection of the point machines
- Increase of the track availability



Austroroll® - high quality switch point roller for turnouts



Austroroll HSR – for swing nose crossings in track since 2010

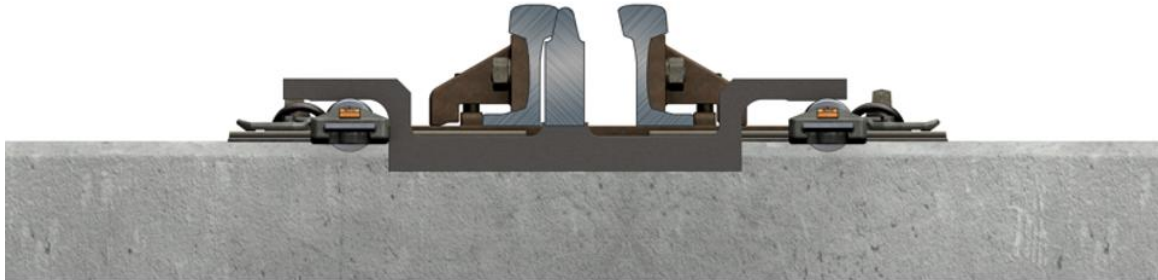


Make your points completely lubrication free!



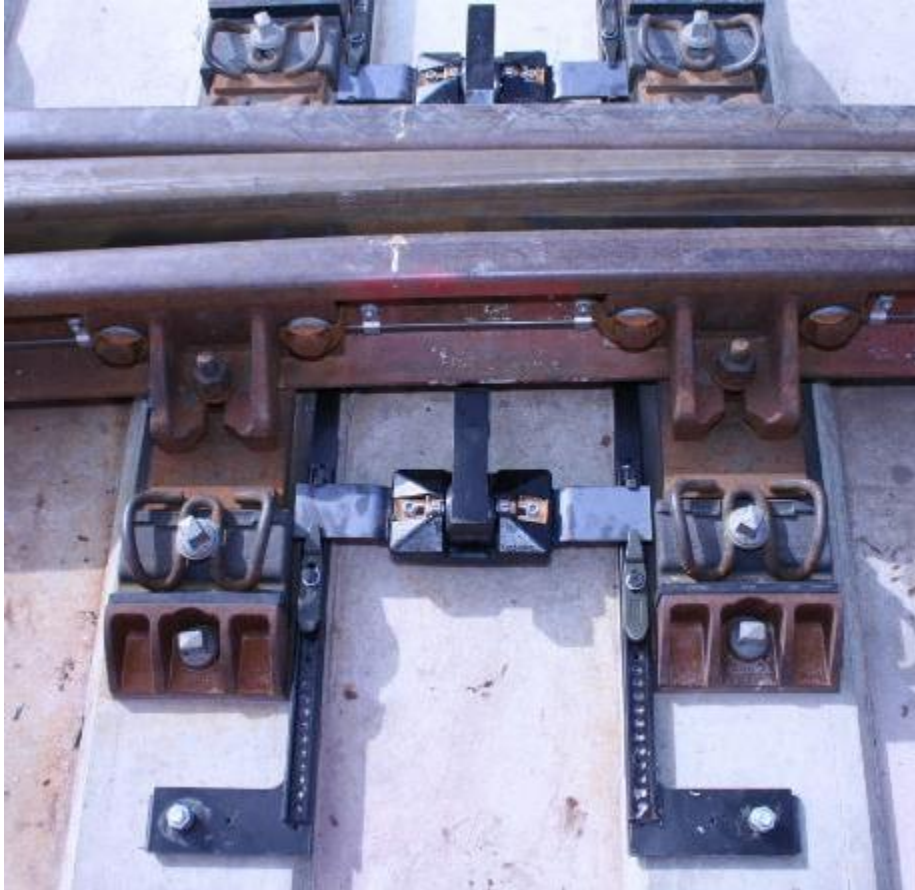
Austroroll HSR – in practice since 2010

- Already installed in Slovakia and Netherlands, Poland (2021).
- Since 2015 also in Germany. VDE 8 high speed line Munich-Berlin.
- Parallel evolution of improvements for an easy and quick installation.
- Reduction of throwing forces and elimination of lubrication.
- More than 400 crossings equipped in Europe.



Austroroll® - high quality switch point roller for turnouts

Austroroll HSR – Germany, slab track



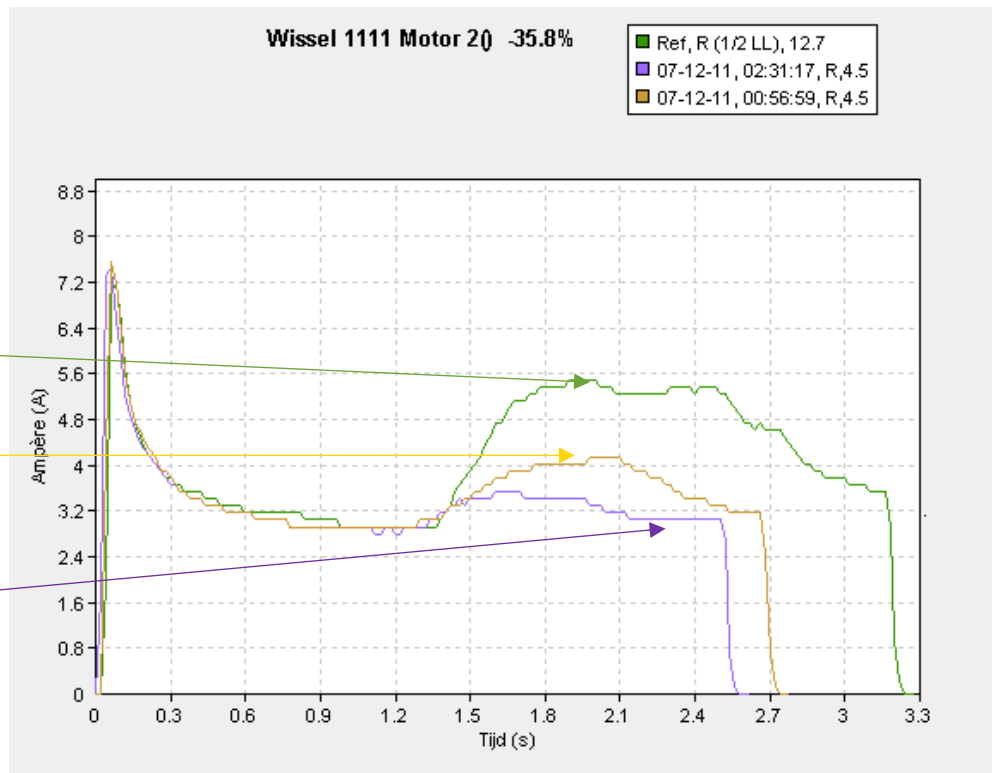


Austroroll HSR – reduction of throwing forces

- 35% Reduction of throwing forces by using Austroroll-HSR in the

PRORAIL-network :

- Green line – before installation
- Yellow line – after installation
- Violett line – after installation and several switching procedures

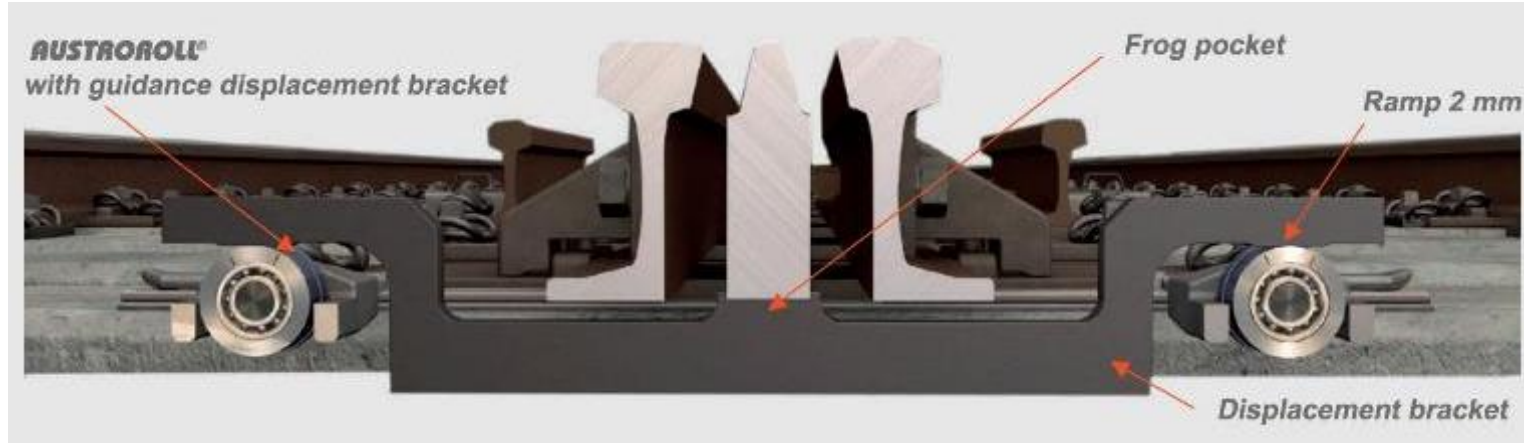


Video Austroroll for swing nose crossings:

<https://youtu.be/9JeN85CIZFY>



Austroroll HSR – operation



- Narrow space conditions do not allow standard Austrorollers.
- Lifting of the nose is achieved indirectly by a displacement bracket.
- It is directed over two rollers installed beside the wing rails.
- At the start of operation, it is lifted by rolling on the ramp till reaching the end position. In the end position it drops again.
- Depending on the crossing length, 2 or 3 units are needed for one crossing.
- Every length/type of swing nose crossing get an individual optimized designed.



Summary - Swing nose crossing (moveable frogs)

- Frog Roller Device Austroroll®-HSR
- 100% lubrication-free moving nose
- Reduction of throwing forces
- Easy and fast installation
- Adaptation to the customer's wishes & swing nose design
- Short payback period (1-2 years)
- Suitable for all types of crossings
- DB approval and framework agreement
- Proven many times at DB, ProRail, ŽSR...
- High-speed line approved.





Perfect solution for different turnouts and slide chairs

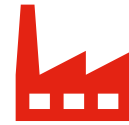


Austroroll® - high quality switch point roller for turnouts

Austroroll in UK – various installations



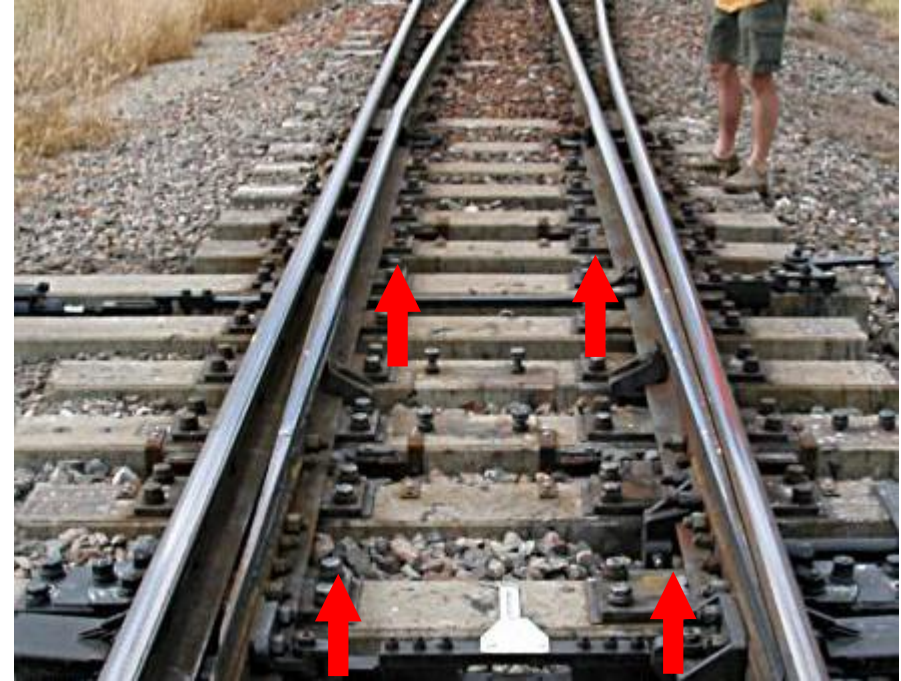
Approved under extreme conditions - worldwide



Example: AUSTROROLL® in various steelworks - Europe & Japan

Austroroll® - high quality switch point roller for turnouts

...approved under extreme conditions worldwide

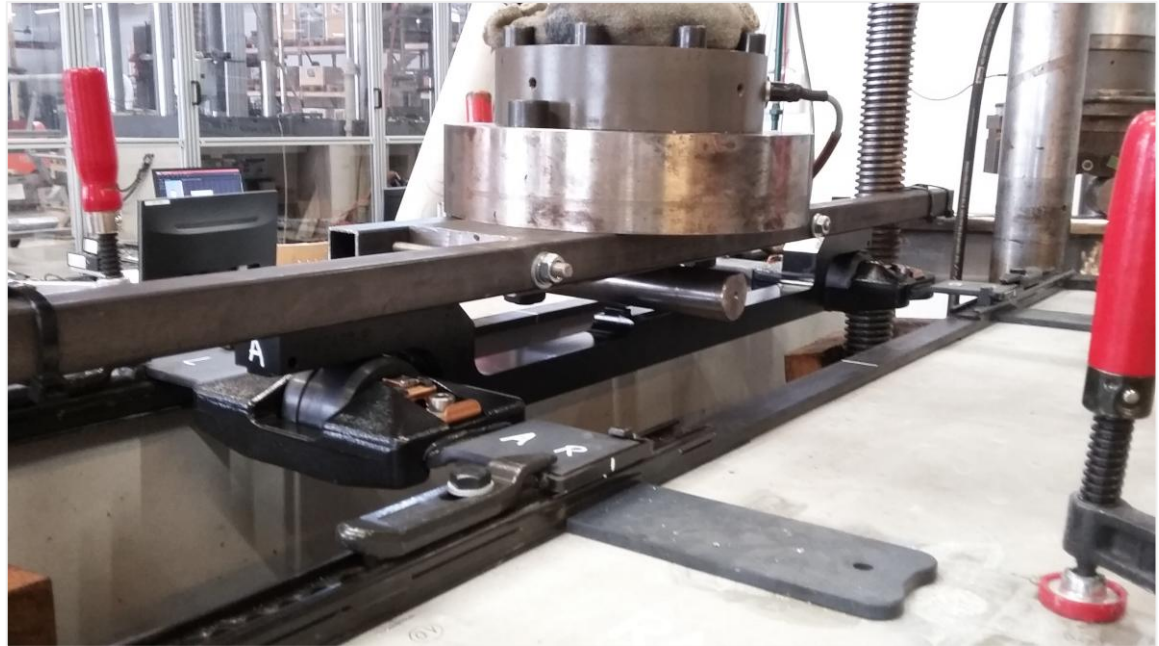


Examples: Scandinavia with -30° and Australia “heavy haul” line and $+60^{\circ}$

„A lot of promises, but how do you test our system?“



Sloping load test with inclined forces
TVFA-Vienna, 10 million load cycles



Pulsation tests AUSTROROLL®-HSR for swing nose, TVFA
-Vienna, 12 million load changes

- More than 50 references such as DB, ÖBB, ProRail and many more
- Partial Installation is possible: Points can always be thrown.
- Installation time is **3 - 4 hours**
- Adjustment of the roller takes **only 5 minutes** for one position
- **Maintenance teams** training available and train the trainer.
- **Distance rods** for new turnouts ensure correct sleeper spacing, already cut rollers can be delivered, installation reduced to 5 min/roller
- **Retrofitting of sleeper spacers** is possible
 - On request - but not necessary if the sleepers are correctly tamped
 - Switches can be train operated e.g. spring/hand points no fatigue issues by design.

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Exhibiting at Raillive with Tiflex and Delkor rail, large display stand right side near entrance.

