

**AUSTROROLL®**

Rollers for railway  
switch blades and  
swing nose crossings





**AUSTROROLL®**

# Your benefits at a glance

- + Optimizes the track availability
- + The only permanent flexible roller system worldwide
- + 100 % maintenance-free
- + Amortization period less than 2 years
- + Easy installation – also possible during train breaks
- + Remains in the track during tamping, grinding or milling
- + Personal service and installation training

## Rolling instead of lubricating    A brand from Wieland

Austroroll sets international standards for maintenance-free roller devices for railroad turnouts with the consistent development of the „rolling instead of lubricating“ concept. Austroroll saves up to 25 liters of lubricant per year and point. Inefficient and labor-intensive slide chair lubrication is now a thing of the past. More than 250,000 roller units are successfully in use by our customers worldwide.

Wieland Austria GmbH is part of the German Wieland Group based in Ulm. Wieland operates globally as a specialist for copper and copper alloys and employs more than 9,400 people at over 80 locations.

## 30 years of experience    Sustainability at all levels

The Austroroll switch blade roller system is produced at the Enzesfeld plant and distributed worldwide by Wieland Austria GmbH. Over 260 employees work at this site 30 km south of Vienna. The product range includes copper alloys from the company’s own foundry as well as semi-finished products, plain bearings, roller bearing cages and precision components made from these alloys. For more than 115 years, the Enzesfeld plant has stood for the highest quality and innovation.

The extremely long service life of Austroroll and the complete elimination of the slide chair lubrication are just two sustainability aspects that speak in favor of using our rollers. Reducing the carbon footprint of our products and processes across the Group, strengthening the circular economy and promoting transparency and responsibility along the supply chain are the main concerns of Wieland’s sustainability strategy.

1992

More than 30 years of experience with rollers

60 %

Up to 60 % reduction of throwing forces

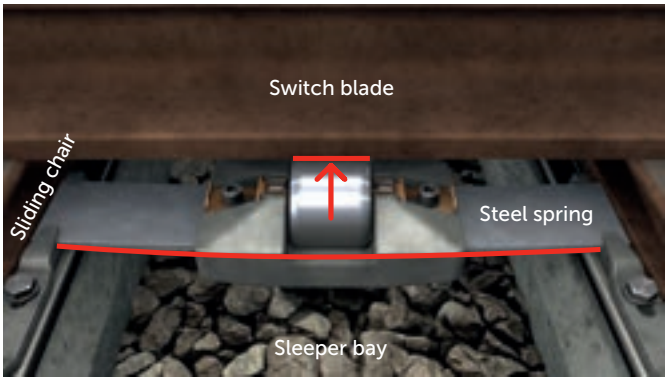
> 250,000

Austroroll units in operation worldwide



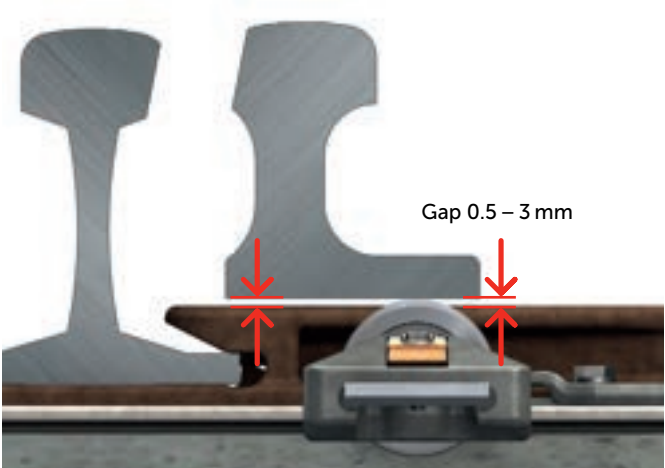
# How it works

When Austroroll is installed in the sleeper bay, the two steel springs will be pre-tensioned so that the roller is in permanent contact with the switch blade.



The Austroroll roller with pre-tensioned springs in contact with the switch blade.

At the start of the setting movement, the tongue immediately rolls onto the roller and is lifted off the slide chair. It then rolls into its end position without wear and with low friction.



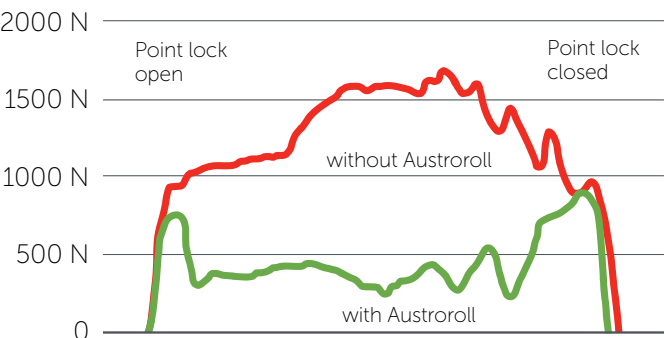
This sectional view shows the raised switch blade.

The horizontal force component presses the switch tongue against the stock rail without lifting it, thus helping the switch to reach the correct end position.



The roller in contact with the switch blade before rolling up, with horizontal force component.

The switch blade remains on the roller until the next setting procedure. Due to the pre-tensioned rollers, neither static nor sliding friction occurs. This permanently reduces the throwing forces and increases the service life of the turnout drive.



Reduction of the throwing force by using Austroroll in a EW49-190-1:9-B.

# Constructive advantages

## 1. Positioning in the sleeper bay

The position of the Austroroll switch point roller between the sleepers – and not next to or in the sliding chair – allows a flexible mounting with pretensioned springs. In addition, neither dirt nor snow or ice can collect and block the roller. This special arrangement also allows the installation near to the heel of the switch blade.



Austroroll in a retrofit version for a switch point on concrete sleepers.

## 2. Elastic support

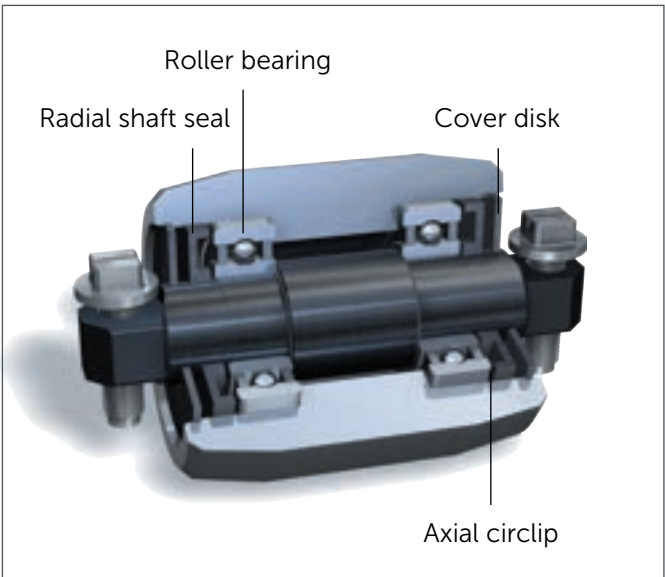
Austroroll is equipped with appropriately dimensioned, hardened steel springs and surface protection. The flexible system and the position in the sleeper bay make Austroroll resistant to impacts, vibrations or other dynamic loads.



Austroroll single roller with springs without mounting devices.

## 3. Special roller design

The large roller diameter of 76 mm makes it easier for the switch blade to roll into the open position. Two lifetime-lubricated roller bearings ensure low friction values. Thanks to the hermetic, 3-level sealing, Austroroll is insensitive to dirt, water, sand, grinding dust, milling chips and other contaminants. This ensures a long service life.



Section of the roller with axle and adjustment screws.

## 4. Modular system

Thanks to a modular concept, the right solution for our customers can be selected from various components depending on the rail profile, slide chair design, sleeper spacing and ambient conditions.

Austroroll can be used for all known switch point constructions, regardless of the manufacturer.

- Rail profile e.g. UIC 60, S54, S49, AREMA
- Turnout design e.g. EW, EKW, DKW, KR, DW
- Sleeper types e.g. concrete, wood, steel, slab track, composite sleepers
- All track gauges and all speed classes
- All load and route classifications

In new turnouts the Austroroll mountings can be integrated and pre-assembled with the sleepers and slide chairs. Existing points can be adapted quickly and easily. It is not necessary to replace the existing slide chairs. We train our customers to ensure independent installation. Our detailed video instructions also provide support thereby.

### Video instructions



## 5. Tamping, grinding, milling

Unhindered tamping, grinding or milling of the points is possible at any time with the installed rollers. The rollers do not need to be covered or protected separately for these activities.

The Austroroll components are made of corrosion-resistant and high-strength materials. They are designed for harsh railroad conditions and can withstand extreme temperature fluctuations from -40 to +80 °C (-40 °F to +176 °F), unfavorable weather conditions and wear.



*Tamping with installed Austroroll rollers.*

# Individual customization for our clients

In addition to our product quality, we also offer our customers a high level of advice. We strive to work together to find individual solutions and optimizations for any type of construction. One example of this is the introduction of mounting plates for newly built turnouts at Deutsche Bahn AG.



*Austroroll in a new constructed EW UIC60-760-1:14-w with hollow sleeper.*

## Austroroll with mounting plates for new turnouts at DB InfraGo AG

With the introduction of the W-fastening for all new UIC-60 turnouts of Deutsche Bahn, we have developed a new, adapted mounting solution. The aim was to retain the advantages of our roller system and to further simplify the installation. As a result, a new mounting plate was introduced especially for our customer. This mounting plates are installed in the sleeper factory together with the plastic intermediate plates and the slide chairs. The pre-assembled sleeper sets are then delivered to the construction site.

There, the adjacent intermediate mounting plates are joined with a spacer rod after the sleepers have been laid, and before the stock rail is attached. The spacer ensures that the sleeper spacing is correct, remaining underneath the stock rail after the points have been installed.



*Austroroll with mounting plates and spacer rod to secure the sleeper spacing for new turnouts.*



*Double roller in "new construction version" with mounting plates in an EW UIC60-1200-1:18.5-w-VS.*

## Roller installation in just a few minutes

With this mounting solution, the springs already have the required length. The supplied, ready-to-install rollers can therefore be fitted and adjusted within a few minutes after the initial tamping.

The successful cooperation and further development of Austroroll with DB Netz AG was underlined by the "DB Supplier Award" in the "Railway Components" category.

## New construction solution for pre- assembled switch points

This construction design allows an installation of the mounting devices in the switch plant and a subsequent delivery with a switch transport wagon to the site. This shortens the installation time and thus the time for the track possession.



# Austroroll moveable frog roller

## Lubrication-free, movable frogs

The patented Austroroll moveable frog roller (MFR) is a rolling device for frogs with moveable point, also called swing nose crossings. With the combination of Austroroll switch rollers and Austroroll frog rollers, it is possible to achieve completely grease-free points. This results in a significant throwing forces reduction. In addition, the track availability is increased, operating costs as well as switch point malfunctions are minimized.



*Austroroll MFR in a retrofit version.*

## Simple operating principle

The principle of functioning is similar to that of the proven Austroroll rolling device in the switch blade area. However, in the frog, the very cramped space conditions do not enable any direct installation of rollers at or under the moving frog point. The function of lifting the frog during the setting procedure is performed by a displacement bracket.



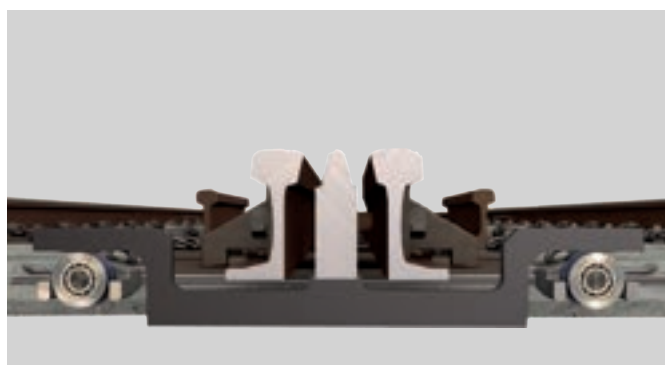
*Austroroll MFR on slab track, type W300.*

Austroroll MFR is suitable for all known designs of movable frogs. Special mountings and displacement brackets are used for new turnouts as well as for retrofitting in ballasted track or on slab track.



*Movable frog with Austroroll MFR.*

This displacement bracket is attached under the frog and guided by two rollers mounted outside of the wing rails. The bracket lifts the frog tip at the start of the setting process, transports it to the opposite end position and sets it down again.



*Sectional view of a movable frog with displacement bracket and special Austroroll frog rollers.*

# Installation examples



*Retrofitting of turnouts with BWG slide chairs.*



*Austroroll in a high speed line with slab track.*



*Austroroll under extreme conditions in a steelplant steelwork.*



*Austroroll at -30 °C in Scandinavia.*



*Austroroll with direct mountings on wooden sleepers.*



*Special design using composite anchors on concrete sleepers.*

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