



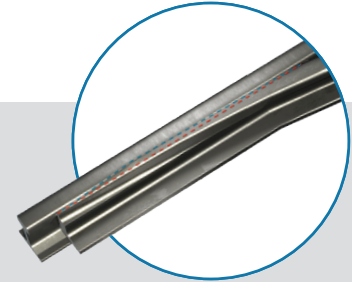
# HPS HEAVY POINT SWITCH

Load capacity-optimized, reinforced switch assembly

## Description

Switch throw devices of turnouts are exposed to particularly high strains and stresses which lead to an increased lateral wear on switch points. The so-called "HPS" - Heavy Point Switch helps to reduce these forces and as a consequence the wear created by a railway vehicle entering a turnout in the diverging or straight route.

The HPS optimizes the transition geometry in the switch area of the turnout. With the slight widening of the gauge in the transition area of the switches the adverse steering effect caused by the rolling radius difference is largely reduced. The running edge geometry of the stock rail are modified in such a way that the wheels steer in the right direction at the right time. This avoids hard flange contact of the wheels and the switch points, reducing the lateral forces and also reducing wear of the components.



## Benefits

- » Reinforced switch tip width in the front area of the transition (i.e. more material available as a wear reserve) that is exposed to the strains and stresses.
- » Reduced horizontal track guiding forces
- » Reduced pinching and breakouts at the switch point/stock rail interface area
- » Reduced maintenance
- » Extended service life of the switches
- » Optimized price-performance ratio



## TECHNICAL CHARACTERISTICS

For the load capacity-optimized, reinforced switch assembly, the switch rail is reinforced in the most critical front area (blue dashed lines). To the same extent, the stock rail is taken back on the machined contact area, in such a way that the head of the stock rail increases and decreases continuously.

The deviation of the running edge at the stock rail from the straight (red dashed line) is very small and thus will not lead to any impairment on the running behaviour.

This has been confirmed in practice. The transition from the machined contact area to the head of the stock rail is designed to significantly reduce squeezing in this area of the stock rail during operation.

In addition, a changed lowering on the switch blade will help to improve the contact geometry between the wheel and switch blade. The same principle can also be used for the straight switch blades.

### Material

- » All materials used for switch and stock rails
- » Corrosion protection: according to requirements

### Technical Description

- » Optimization of the wheel transfer in the switch device
- » Significant reinforcement of the switch point width in the area exposed to the highest stresses and strains.

