



# Comprehensive track alignment system RhoTAS

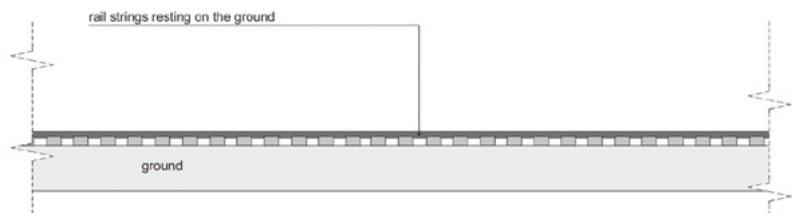
// Universal - Stress-free - Modular

# Challenge and solution

// The main difficulties to be faced when constructing slab track is how to bring the rails or the track panel, which are usually only roughly positioned on the subconstruction, into their specified precise alignment and how to hold them there temporarily yet effectively until they are concreted into place. One of the greatest challenges in connection with this operation is how to handle the sometimes huge stresses in the track panel caused by the loads from site vehicles. It was these somewhat contradictory aims that generated the idea of the RhoTAS track alignment system:

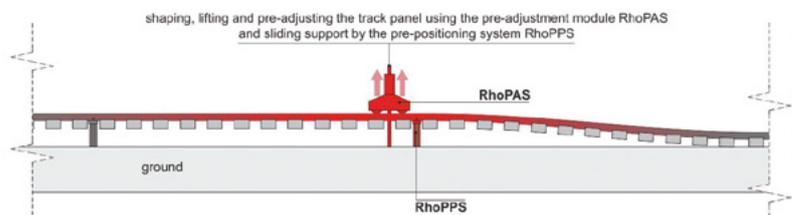
## Roughly positioned track panel

The accuracy of the rail inclination, gauge, transverse position and above all the height of the roughly positioned rails or track panel at this stage is generally very far from the desired value.



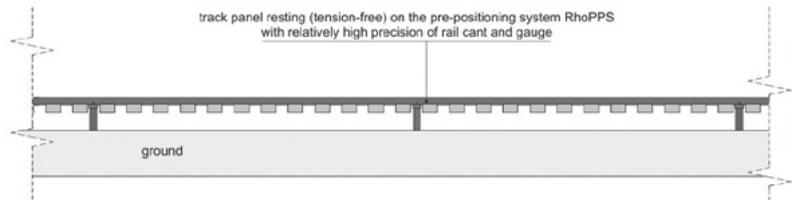
## Stress-free support on RhoPPS

The RhoPPS pre-positioning system allows the rails continuous free horizontal movement, thus any stresses that build up in the track panel are for the most part relieved. In addition, RhoPPS positions the rails (even for sleeperless track) very accurately in terms of their gauge and rail inclination.



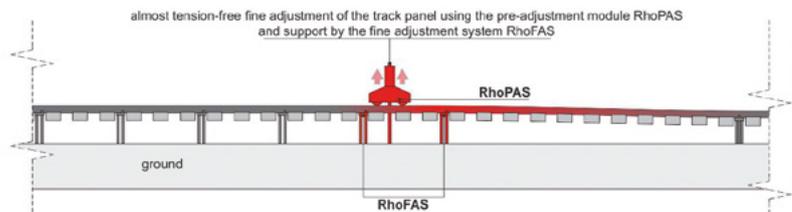
### Pre-positioning with RhoPAS

The RhoPAS system module pre-positions the track panel in the direction of progress on site with medium accuracy. Considerable temporary stresses arise in the track panel as a result of the large vertical and horizontal movements. The track panel is therefore supported at greater intervals on RhoPPS system modules.



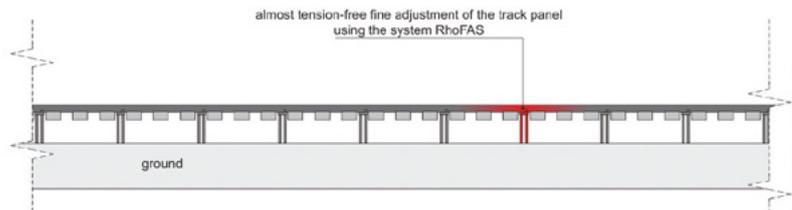
### Pre-adjustment with RhoPAS

A second, considerably finer adjustment process using the RhoPAS system module achieves the final track geometry without generating any further significant stresses. The RhoPPS pre-positioning system is removed and RhoFAS fine adjustment system modules put in place at shorter intervals.



### Fine adjustment with RhoFAS

Immediately before concreting, the track geometry is set to millimetre accuracy with the RhoFAS fine adjustment system. The low stresses in the track panel allow this stage of the process to be completed quickly. At the same time, the sensitivity of the track panel to mechanical loading is relatively low.



# RhoTAS – The system modules

Routine and efficient for  
exact, stress-free track  
support



## RhoPAS

The RhoPAS pre-adjustment system is a compact, easy to operate track lifting device. Track superelevation, transverse position and height – it provides very high accuracy for any arrangement of track. Its intelligent support concept allows the system to work independently of the superelevation of the track panel or unevenness of the underlying surface to provide extraordinary positional stability.

## RhoPPS

RhoPPS is a simple and effective pre-positioning system. Any length of track panel can be supported in a stress-free condition and close to its desired final position, simply and economically. Rail superelevation and gauge are preset fully automatically.

## RhoFAS

RhoFAS is a highly precise and very robust fine adjustment system. Suitable for most slab track systems built using the top-down method, its characteristic features are simplicity and ease of operation, compact design and minimum intrusion into the track construction. A number of different types of rail vehicles can travel over the track panel while this system is in place.

# RhoTAS – Systematic track alignment

// The installation of slab track demands a high degree of precision. The RhoTAS comprehensive track alignment system adjusts track elements placed less than accurately on a subconstruction step by step to produce a precisely aligned and supported track panel. By taking into account the behaviour of the installed track, the stresses that would otherwise arise can be reduced at a convenient time during the operation. The combined use of individual modules of the RhoTAS track alignment system ensures the work proceeds efficiently and follows a set routine.





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