



## SWITCH ASSEMBLY

We guide your vehicles safely in the right direction

### Description

Since trams are particularly stressed in the range of switch assemblies that direct the rail vehicle, different types of switch assemblies are used in our turnouts depending on the application.

With all our switch assembly designs, we place great importance on safety, availability, durability and a material-appropriate maintainability.



### System advantages

- » ZV types for all rail profiles, rail qualities and maintenance philosophies
- » Ensures the highest level of functional reliability and maintainability
- » Use of highly wear-resistant materials in wear areas
- » Replacement of wear parts (switch rail) without affecting the top layer (ZAD 30/45/S)

## System features

- » The right switch assembly for every machine size for all rail types
- » Special designs of switch assemblies for external curve turnouts and inner curve turnouts
- » Switch assembly types
  - » As a welded box design using rail profiles according to VDV OR 14.3 as a flat bed or deep bed switch assembly
  - » As a monoblock (flat bed switch assembly) made of highly wear-resistant 400HB steel over the entire range of the switch assembly
  - » With welded or exchangeable switch (ZAD 30/45/S system)



# MONOBLOCK SWITCH ASSEMBLIES

## Monoblock switch assemblies with continuously wear-resistant track

### Description

Availability, reliability, maintainability and safety with low LCC are key requirements of the operator and crucial for the competitiveness of the railways. In response, voestalpine BWG has developed a wear-resistant switch assembly for local transport turnouts.

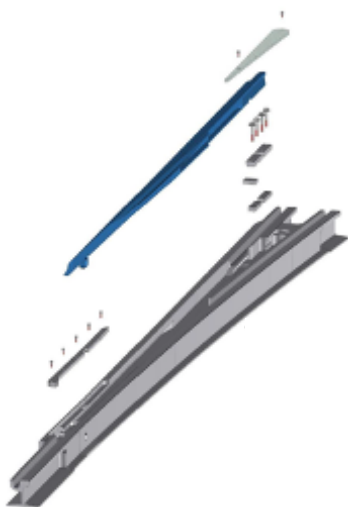
In this design, high wear-resistant steel is used throughout the area of the switch assembly in order to counteract wear, high maintenance costs and early component changes. An adaptation to the connection profile is always possible due to the variable design of the driving head in the monoblock and the height-variable sandwich design. Furthermore, it makes it possible to install energy-efficient insulated heating.

### System advantages

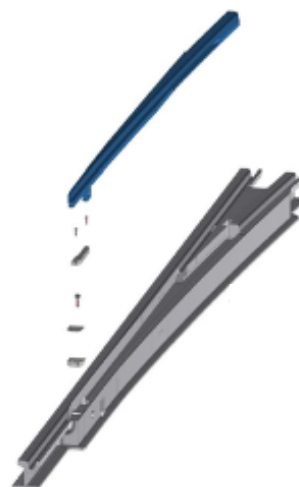
- » Continuous monoblock with integrated switch adapter (ZAD 30/45/S) or welded switch
- » Low-wear running surface due to the use of highly wear-resistant 400HB steel for a significantly longer service life
- » Variable installation height makes it possible to adapt the system to all rail profiles
- » Individual travel head profiles for optimum wheel-rail contact
- » Profile-specific connection at the building ends for all common welding processes (e.g. alumina-thermic)
- » High level of availability

## System features and materials

- » Design as a flat bed switch assembly
- » Switch assembly design
  - » With exchangeable switch (ZAD 30/45/S system)
  - » With welded switch (interchangeable due to welding process)
- » Special designs of switch assemblies for external curve turnouts and inner curve turnouts possible
- » Use of highly wear-resistant 400HB steel in the entire area of the switch assembly



Monoblock switch assembly with ZAD 30/45/S



Monoblock switch assembly with welded switch



## SWITCH ADAPTER WITH ZAD 30/45/S

### Switch adapter for switch assemblies made of grooved rails

#### Description

Switch rails are the most sensitive components in turnouts and are exposed to the strongest loads. To protect them from increased wear, more resistant steels must be used than is required for the other components.

Due to its special design, the switch adapter ZAD 30/45/S developed for this purpose meets all requirements for long lay times, ease of maintenance and high efficiency.



#### System advantages

- » Low-wear overrun area due to a 30°/45° scarf joint or S-joint
- » Force-fit and form-fit, permanent screw connection instead of difficult and uneconomical welding
- » Economical solution due to short assembly times and significantly reduced maintenance
- » Short breaks for repairs in the track (switch replacement)
- » High level of availability

### Technical description

- » Switch design consisting of the tram switch rail with 30°/45° scarf joint or S-joint and dovetail guide, the standard rail with 30°/45° bevel or S-joint and the switch adapter with clamping wedge, connecting parts and anti-creep device
- » 30°/45° scarf joint and S-joint ensure a low-wear and quiet overrun from the switch to the standard rail.
- » A dovetail guide with the screwed clamping wedges allows for the force-fit connection and an additional form-fit connection
- » With an anti-creep device, additional protection against the longitudinal displacement of the switch

