RAILWAY SYSTEMS
by voestalpine

TORSION BACK DRIVE

Mechanical system for transmitting switch movements across multiple setting and locking levels.

Description

The switching movement generated by the point machine is reliably transmitted via rotation to additional switch rail or setting levels. The point machine's horizontal stroke is mechanically converted into a rotary motion and then transformed back into a precise linear movement. This allows multiple setting levels to be operated synchronously and safely. The system is mounted close to the track on the sleepers, either in the centre of the track or beside the track, and can be optimally adapted to various turnout geometries and designs, both in the switch assembly and at the movable point frog.

System advantages

- Reliable force transmission across multiple actuation levels – suitable for various turnout layouts
- High operational reliability: purely mechanical operating principle
- Reduced maintenance effort: minimal lubrication, no readjustment required under temperature variations
- Low susceptibility to failures: resistant to frost and contamination
- No additional impact protection required – easy installation and inspection within the track area
- Turnout remains machine-tampable when using trough sleepers

voestalpine Railway Systems
www.voestalpine.com/railway-systems

voestalpine
ONE STEP AHEAD.

MECHANICAL EFFICIENCY INSTEAD OF COMPLEX RODDING

The robust and easy-to-adjust rodding solution reduces installation and maintenance effort as well as potential sources of failure. Its compact design ensures stable long-term functionality.

The torsion back drive is a space-saving and flexible solution suitable for both new-build projects and retrofits.

Technical characteristics

Designation	Value / Type
Field of application	Switch assembly and movable point frog
Gauge	Independent of gauge
Stroke range	Adaptable to the turnout geometry
Trailability	Max. 40 km/h
Track fixation	Centre of the track or beside the track
Max. number of locking levels	4
Compatibility	Compatible with all standard point machine and locking systems. Perfectly aligned system solution with ECOSTAR, SPHEROLOCK® NG and UNISTAR.

voestalpine Railway Systems
www.voestalpine.com/railway-systems

voestalpine
ONE STEP AHEAD.

Copyright by voestalpine Signaling Austria GmbH • Technical changes, mistakes or typing errors excepted.
7-2026/v1 EN