



## CONSULTING & ENGINEERING

Comprehensive consulting services and sustainable engineering in the field of axle counting and axle detection

Creation and definition of track clearance sections and interfaces

Based on track layout plans, we create the concept for axle counting and define the monitoring sections. Depending on the customer's requirements or existing infrastructure, a decentralized or central system architecture can be used for axle counting. In the next step, the interfaces to the downstream systems (such as signal boxes, level crossing systems, etc.) are defined and the axle counting system is adapted to the given infrastructure.

Design of complete solutions

If required, complete control cabinets including UPS (uninterruptible power supply), communication components (routers, modems, converters) as well as diagnostics and visualization can be supplied. This

shortens installation and commissioning to just a few hours. The planning and documentation of these components is carried out using E-Plan and can be easily integrated into your own track plans or directly enclosed as system documentation.

Analysis for special axle counting tasks and special installation locations

Special tasks or installation sites (trams, tunnels, industrial railways with harsh environmental conditions) must be examined in detail in advance. Our specialists provide support for these tasks and, if required, can also organize and carry out test set-ups (test runs). These analyses are concluded with a detailed report and suggestions for the optimum installation location as well as installation instructions for the wheel sensors.



## CERTIFIED TRAINING

Comprehensive range of training courses for planning, installation, service and in dealing with modern axle counting technology

### Training for trainers

We offer sustainable and comprehensive training sessions for trainers, which combine practical and theoretical knowledge and ensure they have the necessary knowledge of products, operation, maintenance and service. Afterwards, the trainer is able to pass on the in-depth knowledge to service technicians or be able to act as a key user and contact partner internally.

### Training for installation and commissioning

In addition, we offer on-site training for the installation and commissioning of axle counting systems as well as training on service and diagnostic tools by our specialists.

### Training for technicians & service personnel

We offer sustainable and comprehensive training sessions (commissioning, service, troubleshooting) for technicians & service personnel, which combine practical and theoretical knowledge and ensure they have the necessary knowledge of products, operation, maintenance and service to be able to ensure the maximum availability of components.



## SUPPLY, LOGISTICS & INITIAL SERVICES

Initial delivery and installation services for axle counting and axle detection

Installation assistance or support

A proper installation of wheel sensors is essential for the availability and service life of an axle counting system. Our experts provide support during the design phase, in project management, train and instruct on-site fitters, provide set-up tips and point out special hazards in order to provide a high-quality axle counting system for railway operation.

"Ready to use" axle counting technology

Delivery of completely pre-configured and tested axle counters, including UPS and communication components if required, significantly shortens the installation and commissioning of a free track reporting system. Customer requirements, e.g. specifications regarding switch cabinets, cable routing into the cabinet or earthing concepts, are fully taken

into account. A further advantage is that training can be carried out in advance for the customer on "his" system without disrupting operation.

Installation by service technicians of the supplier

In some cases, the customer does not have the corresponding capacity or the specific installation expertise. voestalpine SIGNALING Group has highly qualified personnel at its locations and at its sister companies who can take care of these tasks competently and efficiently. The focus is on the installation of the signal-technical components, as well as on the interaction of the systems with the turnout, which is optimized and quality-tested afterwards. The customer benefits from the expertise of the system provider.

## CONTINUOUS SERVICE / SERVICE LEVEL AGREEMENT

Services and agreements for wheel sensors and axle counting technology over the entire product life cycle

### Remote maintenance

We continuously (24/7) monitor the systems by using monitoring software or according to customer requirements. The continuous monitoring makes it possible to detect imminent faults in the axle counting system at an early stage. The remote maintenance processes make it possible to flexibly adjust to customer requirements with respect to internet security.

### Emergency warehouses for customers with maintenance contracts

On customer request, we operate local crash parts warehouses, which ensure the availability of spare parts while adhering to defined response times. The processes for accessing the warehouse are coordinated individually with the customer in order to ensure a smooth integration into their logistics processes.

### Maintenance activities / Maintenance contracts

We offer the customer standardized maintenance activities:

- preventative maintenance
- occasion-based maintenance
- corrective maintenance
- spare parts provision
- software and hardware upgrades
- 24/7 availability via phone and email