

**TRAINWEIGH**  
PRECISION ENGINEERING



After 20 years of research and hard work,  
this is what we came up with...

**FORCE**

**WIM** TRAIN  
WEIGHING

**Advanced Train Detection and Control** is getting indispensable for more and more businesses. What those businesses have in common is the need for reliability, precision, and endurance of the equipment, even when used in very rugged environments.

## Weighing in Motion

By weighing the train when it's moving and even while being loaded, the WIM system stands for efficiency and safety. Output data can, for example, be used to optimize automatic loading systems, and to collect data for production volumes and GTK on main lines. And, safety being most important of all, data from the WIM system can be used to ensure that each car is evenly loaded, and to prevent overloading.

## Wheel Flat Detection

In order to assure safety for train traffic, it is crucial to track down wheel defects in time. The WFD equipment is a highly robust and reliable product based on the technology used in our Weighing System.

Due to the versatile data output, the WFD system is an excellent tool for collecting data to optimize maintenance.

## Train Detection

When developing the TD system, the mission was to outperform the traditional technology, that was sensitive to changes in weather and vulnerable to the wear and tear from the use in rugged environments. The result is a robust and reliable system, with a minimum need for maintenance, and an MTBF bordering on the extreme.

The original requirement specification came from the Swedish National Rail Administration, and the system was developed accordingly.

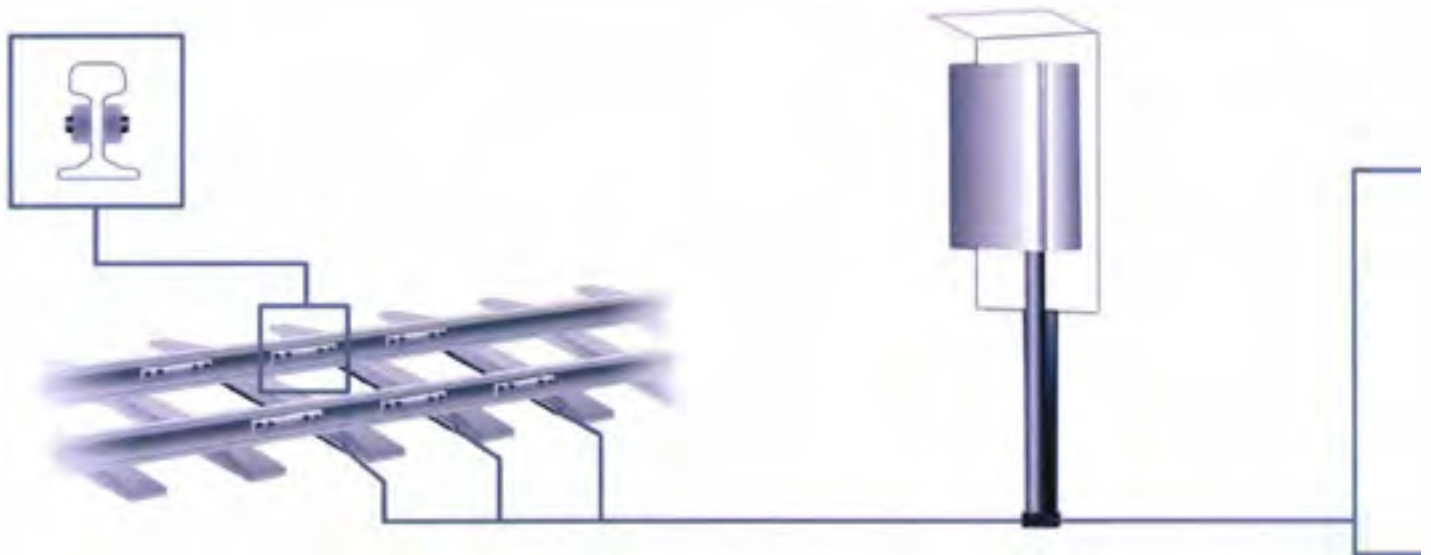
# High Speed Trade Approved Weighing Solutions

**We have developed** equipment for advanced train detection and control for more than 20 years, with a never fading passion for quality and the art of engineering. The equipment is developed for, and tested under, severe Nordic conditions, and has been implemented in some of the toughest environments in the world.

## Fast and Easy Installation

Without disturbing normal traffic, and with no need for concrete foundations, cutting or welding, the installation of the system is fast and easy. The installation is made by simply drilling holes and bolting the sensors into the rails. This does not affect the strength of the rail, nor the maximum allowed speed on the track.

All you need to get the system operating is an ordinary mains power supply.



## TrackWeigh Maintenance

Due to the ingeniously robust design, no moving parts, and a high level of quality in all components, all maintenance needed is done with a minimum of traffic interference.

The system is highly modular, which makes the replacement of parts very easy.

# Easy Installation and Maintenance

## Quality and Environmental

- ISO 9001/2000
- ISO 14001
- IP68
- Electrical components are of the highest industrial grade
- Industrial standard for all components

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### → **Data presentation**

The system has a user-friendly, graphical interface by default. The interface can be used for real-time data monitoring of weight, wheel damages, load, and filtering data for alarms and reports.

### → **Data output**

The system is built on industry standards for data base storage and data output. This makes it easy to integrate with a range of systems, such as APC, AVI, and ATC.

The data collected and processed by the system can also preferably be used for integrating with invoicing, reports and statistics for optimized maintenance.

## Data Processing

### **Performance**

Our system is certified according to OIML R106 by the Technical Research Institute of Sweden.





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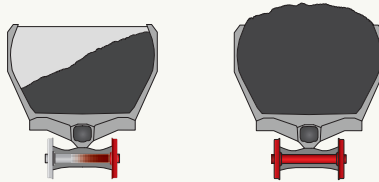
**WIM TRAIN  
WEIGHING**

Cost Effective Accuracy

0.5 %  
OIML R 106

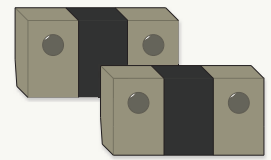
Market leading cost of investment to accuracy ratio.

Uneven/Overload Detection



Increase safety by detecting faulty loading of the cars.

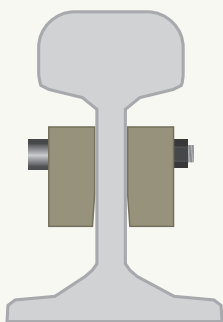
Ruggedized and Robust



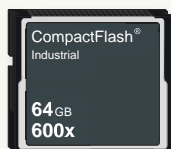
Quality for harsh environments with a MTBF of 90 000 hours.

## Fast and Easy Installation

Our patented bolt-on sensors do not require the track to be closed during installation and maintenance which dramatically reduces traffic interferences.

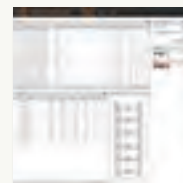


Built-in Backup Storage



The local CF card ensures that no data will be lost in case of a connection loss.

Embedded User Interface



Use any modern web browser to access the built-in user interface.

# Weighing In Motion

Modular Approach



Customize our system to your specific needs.

Multiple Systems Combined



Connect multiple weighing stations to a single database and UI.

# Technical Specifications

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## WIM System Cabinet

Dimensions (H x W x D)	780 x 610 x 375 mm
Shipping weight	100 kg
Environment protection	IP67
Operating temperatures	-30°C to 80°C
Power	100 - 240 VAC, 50-60 Hz, 6A
Consumption (with heater)	Normal: <80 W (250 W), Max: 210 W (350 W)
Accuracy	1-0.5% depending on configuration
Measurement range	Limited to rail type, max load specification
Classification	OIML R 106
Graphical User Interface	Built-in web-based interface
Communication interfaces	USB, RS-232, RS-485, TCP/IP 10/100Base-T Ethernet
Storage	CompactFlash® card / External MySQL™ Database (optional)

## Multi-Functional Sensor Bar (MFSB)

Dimensions (H x W x D)	47 x 90 x 22 mm
Shipping weight	1.7 kg
Environment protection	IP68
Operating temperatures	-30°C to 80°C
MTBF	90 000 hours

Contact us for further information:

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