



FORCE DPS

Derailment Protection System

Trainweigh – Rail Weighing Specialists

Weighbridge Services Ltd is a family run business based in Sheffield, UK. With over 40 years experience of designing, building and installing both road and rail weighing equipment, our team of engineers cover almost every aspect of the weighing industry.

Our Trainweigh brand of products, offered solely by Weighbridge Services Ltd, offer a vast range of rail weighing solutions. Over the past 10 years our product range has benefited profoundly from increased R & D budgets, a stronger supply chain and the increased expertise of our workforce by bringing in experienced employees from other parts of the rail weighing industry.

The Trainweigh range is designed for application into any rail infrastructure from factory installed weighers and testing systems to out-in-the-field weighing and data collection services.

We are now positioned as one of the leading train weighing specialists and can supply a vast range of products worldwide, both off-the-shelf and bespoke.

We look forward to hopefully working with yourselves.

Regards,

The Trainweigh Department



OUR AFFILIATIONS







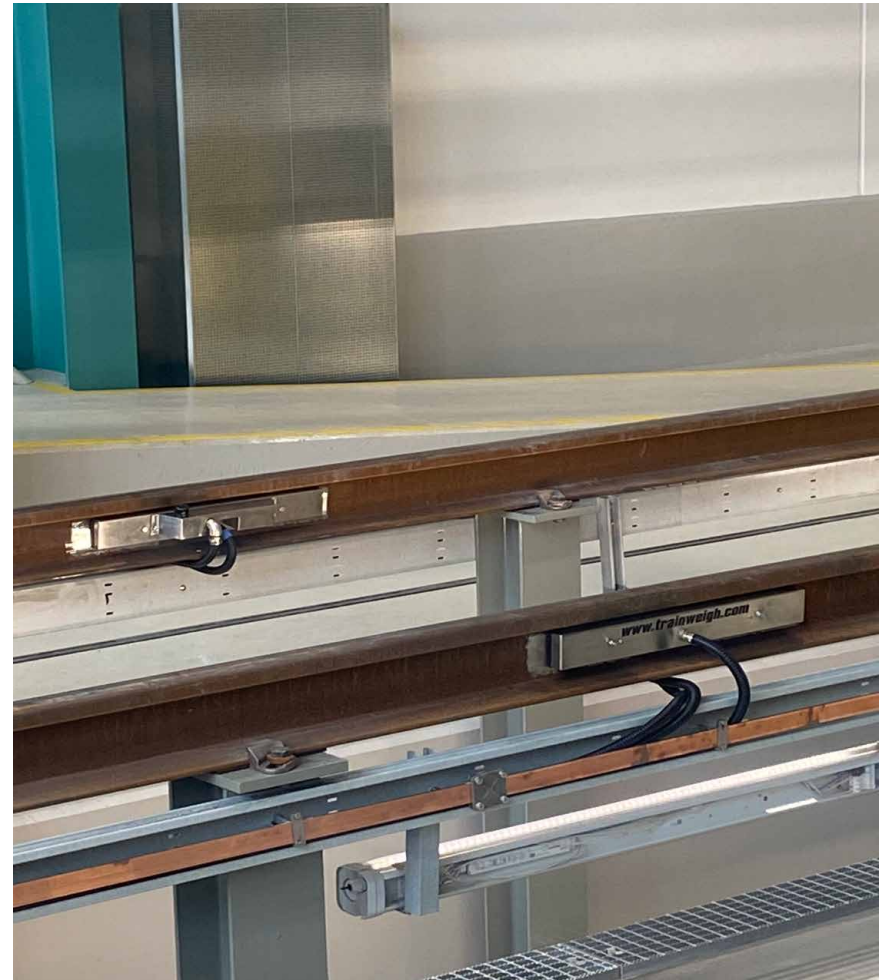
DERAILMENT IN ITS TRACKS

In order to make trains as safe as possible, it has been identified that a wheel force measurement system needed to be developed to automatically check and inspect the balance of trains and ensure nothing has worn or failed between service schedules. Our Force DPS force measurement system is the final result of a major R&D project held by our Trainweigh Department.

The Force DPS is an automated system that can identify individual wheel force loadings. The system will raise an alarm if any wheels or axles are out of a pre-set tolerance.

Health and Safety is optimised with the Force DPS' built in Centre-of-Gravity checking system. This makes identifying load errors, wheel errors and suspension faults quick and simple. The Force DPS provides the operators with documentation that proves the train is within wheel force tolerance and is subsequently in accordance with worldwide guidances and DIN Standards.

The Force DPS System is especially useful for proving that the train, carriages and cargo are safe. All data can be stored internally on the Force DPS for downloading to a PC or USB stick and can also be printed for records of the readings to be signed off and stored for future reference. The recorded data can easily be integrated into ISO quality systems.





FORCE DPS

Major safety concerns can be eliminated by force measurement of your railcars:

- ***PREVENT DERAILMENT***

- Automatic force measurement checks will reduce the risk of derailment by highlighting areas of concern over each railcar.

- ***SAFETY SYSTEM WATCHDOG***

- The Force DPS system and software is designed to automatically alert the users and any required personnel that a failure has occurred and will not allow measuring of the railcars without 100% operational efficiency.

- ***IDENTIFICATION OF WHEEL BALANCE DISCREPANCIES***

- The Force DPS works to an accuracy of up to 0.2% allowing users to instantly detect any wheel force imbalances.

- ***COMPONENT WEAR REDUCTION***

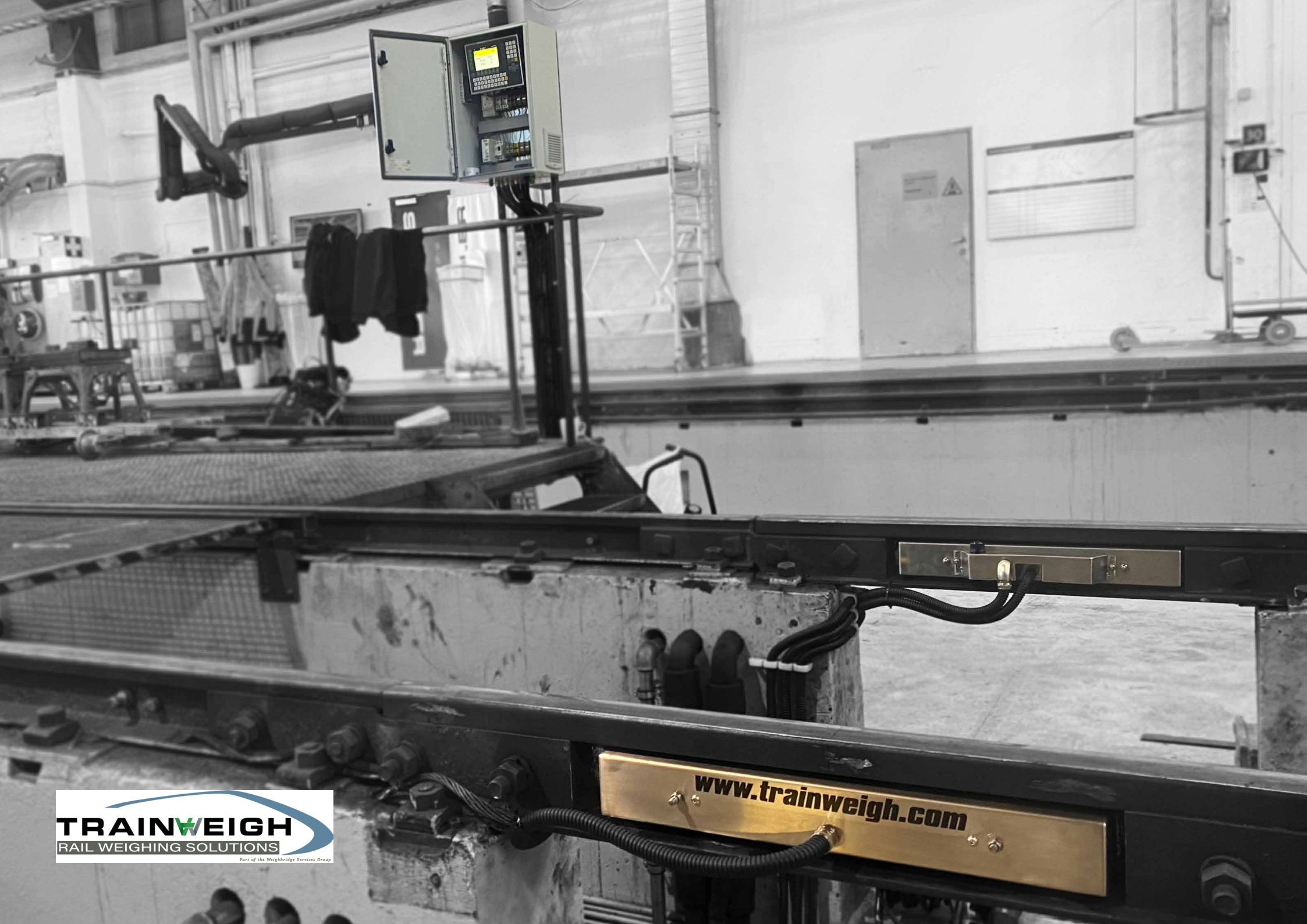
- Over time the railcar components, both moving and non-moving, can be heavily effected by weight discrepancies in certain areas of the construction. These can be highlighted and corrected to get the most efficiency from the components as possible.

- ***SUSPENSION ERROR CHECKING***

- The suspension can be monitored and tested with inflation and deflation methods whilst in situ on the Force DPS system. This will easily identify where possible issues of imbalance will occur in the unlikely event of an air suspension failure. This is required by any workshop in accordance with legislation DIN EN15654.

- ***QUALITY APPROVAL RECORDS***

- The Force DPS system is CE Approved to ensure quality and traceability of the system.



- ***How does the system Work?***

- The sensors are applied to the rail and bonded into position, no rail track alterations are required.
- Flexible armadillo cables connect both the bases and controller together.
- Trains are measured automatically every time they pass over the Derailment Protection System. When a discrepancy is found, an alarm is raised signalling the error for immediate investigation or further analysis.
- The Force DPS has the ability to perform a high accuracy static wheel force measurement test to ensure the offending wheel or axle weight can be further scrutinised and confirmed.
- Alarms are raised when a tolerance error is found

- ***What is required for an installation?***

Force Measuring Base

- ✓ A clear rail track area of 600mm (the rail track must be open in order for the sampling to be obtained).
- ✓ For maximum accuracy the scale should be installed into a level rail track.

Controller Unit

- ✓ A suitable position and power supply.
- ✓ Maximum distance between the base and controller of 15 meters.





FORCE DPS - TECHNICAL INFORMATION

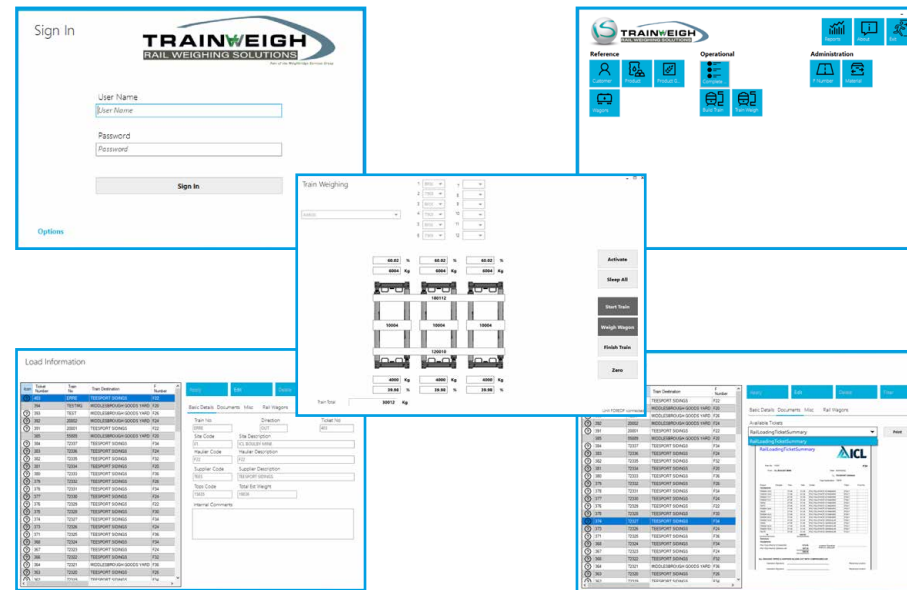


- Fully Hermetically Sealed.
- Multiple wheel weighing sensors per unit.
- Variable weighing area based on suitability of existing rail infrastructure.
- Fits to all standard rail types.
- Fits to all standard rail gauge types.
- Data transmission: BUS, Ethernet, USB, WiFi.
- Data Export Format: .txt, .csv and others.
- PC interface for Microsoft™ Windows™.



Force DPS	600mm Standard size, other configurations are available
Live/Usable Weighing Area	300mm
Weighing Method	Static and Dynamic
Software	Upgradeable to full stock control reporting
Material	Stainless Steel Housing
Rail Gauge	No Limit
Rail Adapters	No Limit
No. of wheel weighing units	2
Working Tempertaure Range	-40°C to +80°
Protection Class	IP65
Power Supply	90-125 vac or 24v DC
Wired Cable	Plastic coated, galvanised steel armadillo conduit protection
Capacity per Wheel	No Limit
Safe Overload Protection	No Limit
Increment	10kg
Accuracy	+/- 0.2% used with calibrated railtrack
Force WIM PDS Calibration	ISO9001:2015
Calibration Test Press Traceability	NAWI
Alarm types available	Digital, audio and/or visual signalling

FORCE DPS - INTERROGATION SOFTWARE



- The software can be used to further scrutinise a train once a force balance safety issue has been found.
- The customisable software helps operators perform the various worldwide standards applicable to the manufacturing or maintenance of rail vehicles.
- All active wheel forces from the DPS are individually displayed. Customisable values are used to show percentage of error tolerances as set out in the vehicle safety guidelines.
- A pre-set alarm is triggered when an out of tolerance balance issue is automatically detected. Audio, visual and electronic alarms are triggered notifying the relevant bodies to the safety issue.

- ✓ Uses in accordance with DIN EN 15654, DIN 27201, EN 14363, DIN EN 50215, UIC V660
- ✓ Support for train maintenance depots
- ✓ Support for train manufacturing factories
- ✓ Remote compatibility
- ✓ Easy to use
- ✓ Reliable
- ✓ Flexible and customisable drag and drop platform



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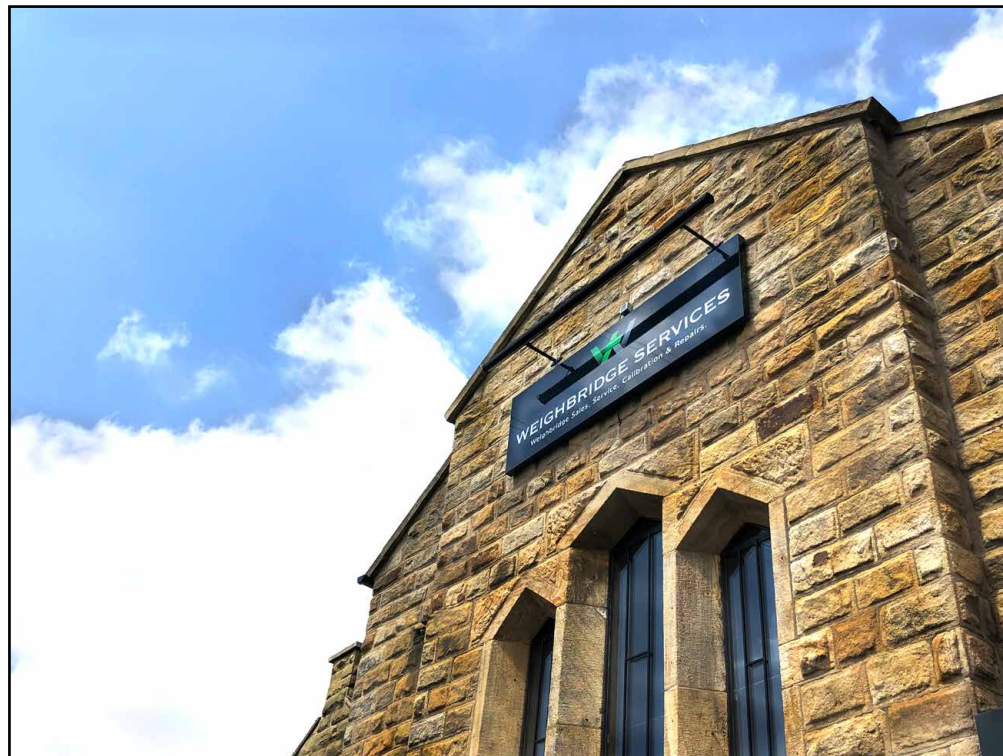
SYNCRIMA
Design by MOSE

Scale nr 1

Scale nr 1

PROUD TO WORK WITH:





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