Why use weighing in rail applications?

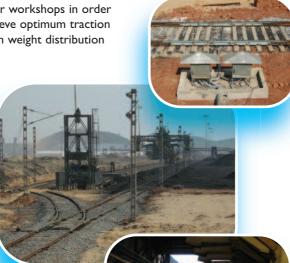
Weighing is crucial to cost control and safety in virtually every aspect of rail operation, from monitoring product deliveries to avoiding overloading penalties. Some of the principle reasons for weighing rail cars include:

- Transaction purposes to invoice clients for amount of product shipped or, as a customer, to ensure your shipper isn't overcharging
- To determine the mass of wagons in order to collect freight revenue from shippers
- To avoid overloading, which can damage wagons and infrastructure, and eccentric loading, which can lead to derailments
- For asset management to minimise high impact loads, especially at track discontinuities
- To ensure any leakage of hazardous cargo is detected immediately upon arrival at the distribution depot

An ongoing partnership

- For chemical applications, as our systems don't have any foundations or cavities to trap heavier than air explosive gases
- For load control to adjust the material flow parameters during automatic bulk loading: this maximizes the payload without overloading
- For production control in batching applications such as charging the furnaces producing coke to make iron

 For balancing purposes at locomotive manufacturer and repairer workshops in order to achieve optimum traction through weight distribution



The Avery India team recognises that a customer's weighing needs go far beyond developing and installing

the system.

We are dedicated to providing the proper maintenance and servicing of your rail equipment in order to keep your business running efficiently. We will design an individual service plan for you, based on your bespoke system and its particular usage. We can also offer commissioning, training, spares and static and dynamic calibration for both new and existing installations in accordance with international metrology directives. As an Avery India customer, you can benefit from our team of trained technicians anywhere across the country. We are truly your complete rail vehicle weighing solution provider and your partner, now and in the future.



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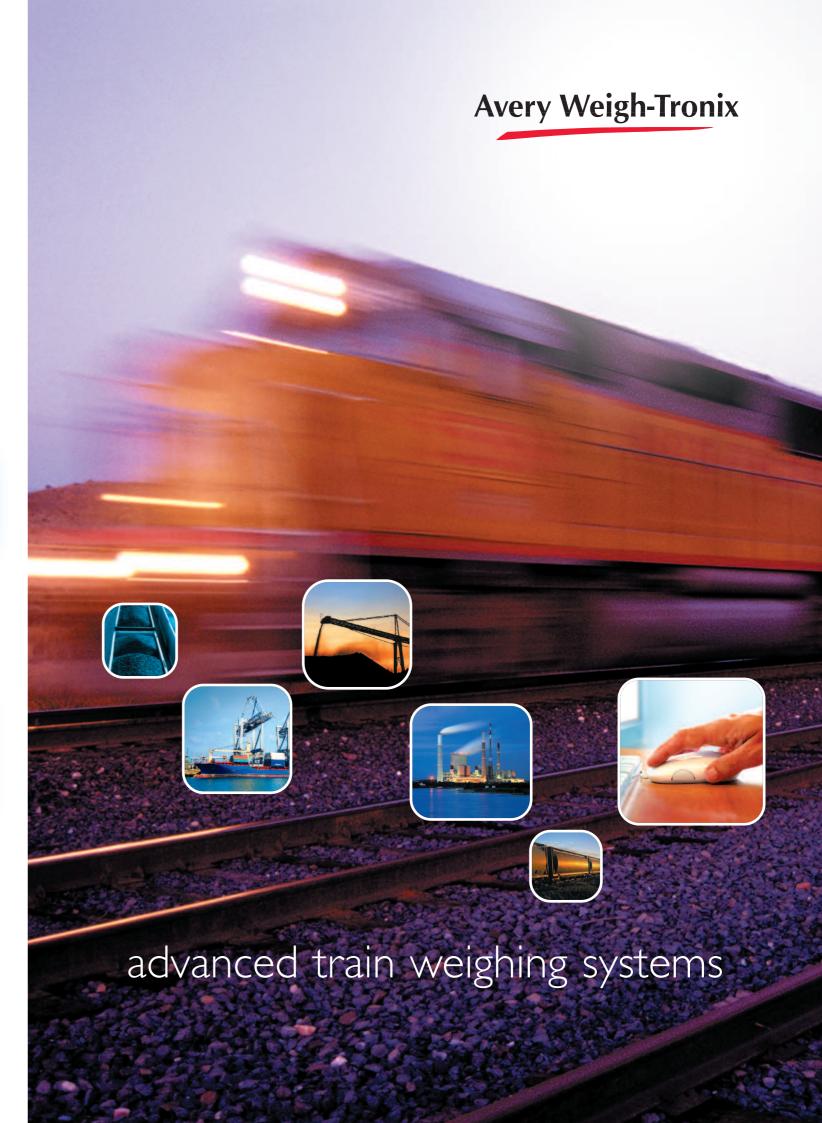
Please call us or visit:
www.averyweigh-tronix.com
or visit your nearest
Avery India Ltd office.

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Putting you in control

As pioneers in dynamic weighing of rail vehicles, Avery Weigh-Tronix now has the largest number of train weighing systems in operation worldwide.

Established over one hundred years ago, Avery India Limited is part of Avery Weigh-Tronix, one of the world's leading weighing companies.

Our specialist team develops solutions for all rail users, from train manufacturers and raw material producers to end users and infrastructure developers. You'll find our systems in action in almost every industry connected to rail networks.

As every system is bespoke, you benefit from a package that's exactly right for your application. Our innovative technology allows us to create solutions which take a different approach than traditional, more costly methods. The results show through clearly on your balance sheet in low lifecycle costs and a short payback time.

Any train, any line, anywhere in the world

With total national coverage for service, installation and support, we can tackle any challenge, anywhere across India. Whether you are upgrading your system, converting a static rail weighbridge to dynamic weighing or starting right from the beginning,

the Avery India team can put a custom system in place with minimal disruption to normal traffic.

Flexible technology ensures the perfect fit

Since each customer's need is different, our expert team combines our products into tailor-made solutions that are just right for the application. Using a combination of the key system elements listed below, we can provide solutions for every application and budget.

Weighing Transducers:-

The type and quantity of weighing transducers depends on customer requirements for speed of weighing, accuracy and whether weighing statically or dynamically.

Weight processor:-

There is a range of indicators available to suit the most simple weighing requirements to the more complex

dynamic and fully PC controlled system.

PC software:-

Our windows based software packages capture data for reporting purposes and archives it. Using these packages, reports can be provided, including axle loads, train consist,

tare, gross, net and wagon type. The software can also flag overloads, over-speed and imbalance.



The biggest range of train weighing solutions from one supplier

528ET

The Avery 528ET is a static wagon tippler weighing system in which a weighing arrangement is incorporated into the wagon tippler (supplied by others) to record the quantity of incoming bulk-material transported using railway wagons, typically required at thermal power plants and cement plants.

52PL

A weighing in motion train weighing solution capable of weighing trains up to 15km/h. This system utilizes the in-track rail transducers supplied on 5.5m of rail, indicator, PC and software.

52\$

This is a pit-type weighing in motion system which deploys a pit-mounted live platform on the railway track. The length of the live platform is 4.2 M and specifically designed to accommodate Indian

Railways' standard 4 & 8 wheeler goods wagons up to 15km/h.

54ER

The Avery 54ER weighbridge system is a static broad-gauge railway wagon weighing system which deploys a combination of two successive pit-mounted live platforms on the same track. The lengths of the live platforms as well as gaps between them, are specifically designed to accommodate most of the commonly used Indian Railways' standard 4 & 8 wheeler goods wagons in coupled or un-coupled condition in a rake.



