

COUNTING SCALES

BENCH SCALES

FORKLIFT SCALES

CHECKWEIGHERS

CONVEYOR SCALES

RAILROAD SCALES

FLOOR SCALES

TRUCK SCALES

INDICATORS

SOFTWARE

JUNCTION BOXES

SIGNAL PROCESSING

MONORAIL SCALES

PRINTERS

REMOTE DISPLAYS

Avery Weigh-Tronix

Avery Weigh-Tronix
Railroad Scales



Simple, economical and accurate railcar weighing

Streamline



A new technological approach to train weighing, providing an accurate, cost effective and quick to install weighing solution like no other.



Installs in hours. Weighs static or in-motion, full or two draft.

Accepts a variety of indicators, controllers and printers.

The new technological approach to train weighing.

The revolutionary, low-cost track scale that ensures proper rail car weights

Train weighing solutions are available in many forms including high accuracy in-line systems for precision trade approved measurement at high speeds to lower accuracy bolted transducer methods which offer basic check-weighing solutions but traditionally prove unreliable, inaccurate or fall short of satisfying all customer needs.

From a name you can rely on

Streamline is an Avery Weigh-Tronix product, from the same stable as the World renowned "Weighline" in-line train weighing system. Designed and manufactured at its head office in the UK, Streamline is an addition to the range of rail products and services already offered world-wide by Avery Weigh-Tronix.

PATENTED DESIGN

The Streamline transducer's unique design is internationally patented and is key to a solution providing an affordable, reliable and OIML compliant product ensuring trains are weighed accurately again and again.

Twin Strip Technology

Streamline uses "Twin Strip Technology" to ignore horizontal and torsional deflections and only measures the vertical forces of train wheels as they roll over the transducers.

Up to four pairs of Streamline transducers can be installed to measure the forces and when connected to a weight processor, convert the signals into weight.

When fixing the device onto the rail, dimensional imperfections in the fixing method or the rail itself may result in the distortion of the transducer. Streamline's unique design absorbs these imperfections without effecting the main measurement.

Safety conscious features

Through its ability to provide actual wheel weights, Streamline helps to identify imbalance and overloading ensuring safety and avoiding financial penalties.

Fully automatic operation

The system can be integrated with any Automatic Vehicle Identification (AVI) system – enabling you to monitor an entire rail vehicle fleet automatically from a head office, terminal or network hub.

Low maintenance costs

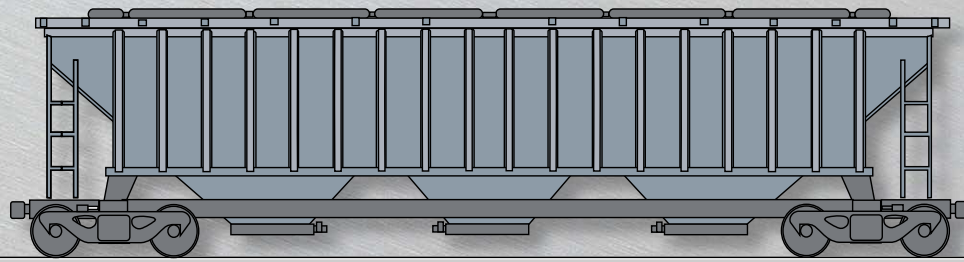
Streamline is reliable and extremely durable. It contains no moving parts meaning the system can be put onto a low maintenance schedule from day one.

Fast installation

Streamline is installed directly without the need to remove or move sections of track. This ensures installation time is fast and keeps rail traffic interruptions to a minimum.



Avery Weigh-Tronix Railroad Scales



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FULL DRAFT OR TWO DRAFT WEIGHING

Full Draft

The full draft system pictured above uses eight Streamline transducers. Each transducer supports one wheel of the car. However, only cars with essentially the same car truck spacing can be weighed full draft. This arrangement is generally recommended where most of the cars have the same or very similar truck centers because it is the quickest and most accurate method. Other sized cars must be weighed two draft.

Two Draft

The two draft system uses four Streamline transducers. This system weighs the truck on one end of the car and then the other. The indicator adds the two weights together to a total car weight. The two draft system is slightly less accurate than a full draft system and does not allow monitoring of car loading. This is the lowest cost method and can be used as a check scale for all cars with standard trucks.

VERSATILE INSTRUMENTATION

Streamline is available with a variety of instrumentation to suit any application.

Model E1310 Indicator

This programmable instrument can be configured to facilitate full draft or two draft weighing, static or in-motion. The Model E1310 will automatically store and display the car truck weights as required. It can handle multiple scale inputs for individual rail section weighing. The Model E1310 can even be used for in-motion weighing up to 1 mph. It is housed in a stainless steel, washdown enclosure that provides protection in outdoor applications. Its dot graphic display is easy to read under all lighting conditions. A comprehensive range of options is available to provide control inputs and outputs as necessary.



Model TSR-4000 In-Motion Control Center

Designed specifically for use with Avery Weigh-Tronix rail scales. Facilitates in-motion, two draft weighing up to 15 mph. Total car weights plus individual trucks, axles and wheels are instantly available on the display or PC monitor.

The system detects direction of travel and automatically handles rollbacks and differing truck spacings. Dimensions of the TSR-4000 are 7" high by 20.5" wide by 19.7" deep.



Model TM-U590 Printer

The TM-U590 is able to print a wide range of slips and documents. This highly versatile printer can handle slip printing up to 88 columns (using 7x9 fonts/half dots), print original slips and up to four copies - and do it all smoothly. The TM-U590 also comes standard with an extended table, so larger slips are inserted flat and fed straight into the printer.



XR Series Remote Display

Allows clear accurate viewing of scale information from considerable distances via its super-bright LED display technology. Designed for indoor or outdoor use.





SPECIFICATIONS

Standard Static Configuration

Rail types: Suitable for rail types above 100 lb AREMA

Active weighing length per section: 8" (20 cm)

Mounting*: Direct to existing rails

Type of weighing: Two draft or full draft

Number of Streamline transducers:

Two draft - four, Full draft - eight

Maximum axle load: 80,000 lb (40,000 kg)

Maximum car weight: 320,000 lb (160,000 kg)

Scale division size:

200 lb (100 kg), switchable to 20 lb (10 kg) for calibration

Static accuracy:**

Full draft: $\pm 0.5\%$ or ± 400 lb (200 kg), whichever is greater

Two draft: $\pm 0.8\%$ or ± 600 lb (300 kg), whichever is greater

Instrumentation:

Avery Weigh-Tronix Model E1310 Indicator with Weighline program

Operating temperature range:

-20° F to 120° F (-28° C to 49° C)

Temperature compensation: Span and zero

Weight: 70 lb (32 kg) per transducer

In-Motion Low-Speed Systems

Speed: Maximum 1 mph (1.6 km/h)

Accuracy:** $\pm 0.5\%$ or ± 400 lb, whichever is greater

Rail Transducers: Four

Instrumentation: Model E1310 Indicator/Controller up to 1 mph.

Wheel Detectors: Two, non-contacting proximity switches

In-Motion Medium & High-Speed Systems

Speeds: Up to 15 mph (25 km/h)

Instrumentation:

TSR-4000 high speed, full feature, in-motion controller

Consult factory for specific applications.

* NOTE: Avery Weigh-Tronix recommends track stability to main line standards (maximum deflection 1/4").

** NOTE: Streamline is not currently approved for certified weighing and cannot be used for custody transfer. A straight, stable track for one car length will produce best results.

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