

Streamline - Frequently Asked Questions

1) What is Streamline and how does it work?

Streamline is a railroad train weighing system for both static and dynamic weighing of most rail vehicles comprising weighing modules which are bolted to the existing rail making it into a weight sensor.

2) Who else offers a "bolt on" train weighing solution in North America?

To our knowledge and at the time of going to print in May 2012, Streamline is unique to the North American market. The design is so unique, we have a patent lodged for its protection.

3) Where is Streamline manufactured?

Streamline is manufactured at the AWTX facility in Birmingham, UK.

4) How is Streamline different to Weighline?

There are a number of ways in which Streamline is different to Weighline. The main differences are:

- i) Streamline is a bolt on system which requires holes to be drilled in the rail and the ties to be moved allowing the bending of the rail, whereby Weighline requires ties to be moved and existing rail to be cut and removed to allow the Weighline rail to be fitted.
- ii) Streamline has a lower static and dynamic accuracy than Weighline.

5) Why does Avery Weigh-Tronix offer two in-line train weighing solutions?

Avery Weigh-Tronix has a Rail Division specifically focussed on offering train weighing solutions to the international market. As such, it has a wide portfolio of innovative products and solutions to introduce to those markets that require them. With increased competition in North America, the introduction of Streamline now provides our customers with an alternative solution, comprising Weighline and providing a product offering rivalled by no other supplier.

6) How accurate is a static Streamline system?

The stated Streamline accuracies are +/-0.5% for full-draft and +/-0.8% for two-draft however customers are experiencing accuracies higher than this.

7) What are the main benefits of Streamline over a conventional railroad track scale?

Streamline can be mounted on existing track bed so no foundation work is required.

Installation time is a matter of hours, not weeks. Total install cost of a Streamline system is several thousand dollars less than a conventional railroad track scale and also lower in cost than the alternative Weighline system.

8) Why do customers buy a Streamline system?

The reasons are many but a few of the main ones are:

- To prevent overload fines and other charges associated with delayed cars
- To monitor a loading or unloading process
- To prevent wasted freight costs associated with under-loaded cars
- To verify incoming weights
- To improve safety
- They do not wish to outlay the expense of a Legal for Trade system

9) What indicators can be used with Streamline?

The E1310 and GSE 560 indicators can be used with Streamline for static weighing applications. For dynamic applications, the E1310 (low speed up to 3mph) and TSR4000 (speeds up to 50mph) can be used.

FAQ's continued:

10) Who are the potential customers for a Streamline system?

Streamline is not intended as a replacement for the Weighline solution as it does not offer the same accuracy. It is a solution intended to offer a more competitive price for those customers who have not been able to afford their own train weighing system previously. Those customers can be found in many industries such as scrap/recycling, grain, utilities, and rail operations. Most potential customers are located on a spur line that branches off from a main line or short line (regional railroad).

11) What if the customer has different sized cars?

A two-draft or in-motion system is suitable for most car sizes with standard axle spacing. A Streamline Application Datasheet is available to help determine requirements.

12) Can Streamline provide more than total car weights?

Yes. The system is very flexible and can be set-up to provide weight readings for individual trucks, axles, and even wheels, something not available with a conventional scale. There are many benefits to having balanced axle loads such as improved traction, less fuel consumption, better end-to-end balance, and safer train travel.

13) How good does the existing track need to be?

It should be well maintained with straight rails, solid ties, and stable ballast to mainline standards.

14) What rail sizes is Streamline compatible with?

There is one model of Streamline transducer and this can be fitted to any size rail above 100lbs/yd. This includes the standard sizes such as 115lb, 132lb and 136lb.

15) Can Streamline be used on rail mounted on concrete or steel?

Yes. Streamline can be easily mounted on rail installed on steel or concrete as long as there is a minimum clearance of ½" between the rail bottom and the mounting surface.

16) Who performs the installation?

Normally a **rail contractor** will perform the rail-works including the drilling and moving of the ties. The **rail contractor** should also perform any repairs to sub-standard track conditions. Once the rails are prepared, the scale **distributor** will install the Streamline transducers, run conduit and cable, wire the system and perform final calibration.

17) How are the rails drilled?

Drawings are available from AWTX to show exactly how the holes are to be drilled for a Streamline installation. It is the responsibility of the rail contractor to follow these drawings exactly.

If the rail contractor requires assistance with equipment with which to drill the holes, AWTX can offer two drilling solutions for rental:

- i) A simple drilling jig which when clamped to the foot of the rail defines the hole pattern for drilling for each module.
- ii) A drilling rig designed for use in conjunction with the commonly available Cembre gas powered drill model LD-3PF.

18) How do I find a rail contractor?

Most states have several small rail contractors that can be located via the Yellow Pages or by searching on-line. Many customers have an existing relationship or at least previous experience with a rail contractor. Some customers do their own track work and have access to necessary equipment. AWTX can assist you with finding a rail contractor if required.

FAQ's continued:

19) What is the typical cost for installation of a Streamline system on existing ties and ballast?

If ties and ballast are in good condition, estimated installation costs range from \$5,500 to \$7,500 for a two draft system and \$7,500 to \$9,500 for full draft or in-motion.

20) How long does the Streamline installation take?

A well-organized and equipped rail contractor can physically prepare the rails in less than 8 hours for a two draft system. The track can be used as soon as the rail contractor is finished so track downtime is limited to one day in this case. Total installation that includes all wiring and calibration can be completed in about two days for a static system and three or four days for in-motion.

21) What does electrical installation involve?

Electrical installation is quite simple and very similar to any other electronic load cell system.

Each group of (8 two draft / 16 full draft) Streamline sections is wired to a junction box using flexible conduit. Standard metal conduits are typically used from the junction boxes to the indicator. The final step is to connect any peripheral devices such as remote displays, printers, wheel detectors, car identification systems, etc.

22) How is Streamline calibrated?

Streamline is calibrated in exactly the same way as Weighline. There are several methods that can be used to calibrate Streamline:

1. Use a known amount of NET weight in conjunction with an empty car. The net weight can be obtained from a motor truck scale or be known weights.
2. Use a railroad test car. If possible, individual truck weights should be known.
3. Use a loaded car that has been previously weighed on a conventional static track scale. If possible, individual truck weights should be known.
4. Use the Avery Weigh-Tronix calibration fixture. Consult factory for details.

23) What about damage from lightning strikes?

Streamline includes lightning protection as standard. Like any scale though, the entire system needs to be properly grounded by keeping the rail sections and indicator at the same ground potential.

24) If Streamline becomes damaged, how is it repaired?

If a streamline module becomes damaged, it can be repaired by replacing either one pair or two pairs of modules, depending on the level of damage. One of the many benefits of Streamline is that in the case of a repair, it may not be necessary to take track possession to perform the repair as the track is not physically disturbed. This will depend on the railroad and customer site of installation.

25) What spare parts are available for Streamline?

Streamline spare parts are available in the form of a pair of modules thereby making stock holding more affordable and keeping stock requirements to a minimum.

26) Where will spare parts be stocked?

Streamline spare parts will be stocked in Fairmont, MN.

27) Is Streamline certified as legal-for-trade?

No, it is not currently certified as Legal for-Trade in the United States or Canada. Streamline does have OIML R60 Certificate of Conformity which means its performance is proven to an internationally recognised standard. This is important to NA rail users (such as vehicle manufacturers) who may depend on the results of the Streamline system for overseas customers. It is also holds Legal for Trade certification for dynamic weighing throughout Europe.

28) Can a Streamline system be used for non Legal for Trade in-motion weighing?

Yes. The E1310 indicator or TSR4000 control system are available for in-motion weighing in conjunction with Streamline.