

## ***Weighline frequently asked questions***

***1) What is Weighline and how does it work?***

Weighline is a unique, patented railroad track scale where the rail itself is used as the weight sensor. Think of it as a double-ended, shear-beam load cell that is "integrated" into the rail.

***2) Can Weighline 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.

***3) What is the typical cost for a Weighline installation 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.

***4) 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.

***5) Who performs the installation?***

Normally a rail contractor will physically cut existing rails and install the Weighline rails. The rail contractor should supply new ties, tie plates, joint bars, compromise bars, and perform repairs to sub-standard track conditions. Once the Weighline rails are physically installed, the scale distributor runs conduit and cable, wires the system and performs final calibration.

***6) 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.

***7) How long does installation take?***

A well-organized and equipped contractor can physically install the rails in less than 8 hours. The track can be used as soon as the rail contractor is finished so track downtime is limited to one day. 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.

***8) What does electrical installation involve?***

Electrical installation is quite simple and very similar to any other electronic load cell system. Each group of (4) Weighline 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.

***9) How is Weighline calibrated?***

There are several methods that can be used to calibrate Weighline:

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.

## **FAQ's continued:**

### **10) How accurate is a Weighline system?**

Many customers are enjoying accuracies equal to a conventional railroad track scale even though the stated Weighline accuracies are 0.25% for full-draft and 0.40% for two-draft.

### **11) What are the main benefits of Weighline over a conventional railroad track scale?**

Weighline can be mounted on existing track bed so no foundation work is required. Installation time is a matter of hours, not weeks. Total installed cost of a Weighline system is several thousand dollars less than a conventional railroad track scale.

### **12) Why do customers buy a Weighline 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 underloaded cars
- ✓ To verify incoming weights
- ✓ To improve safety

### **13) Where are the potential customers for a Weighline system?**

Customers can be found in many industries such as scrap/recycling, coal, steel, chemical, grain, cement, 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).

### **14) 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.

### **15) Is Weighline certified as legal-for-trade?**

No. Even though Weighline offers outstanding accuracy, it is not currently certified as legal-for-trade in the United States or Canada.

### **16) What if existing rail is not 115 lb/yd like the standard Weighline?**

Different track sizes can be joined by using compromise bars. They are special rail joint bars that maintain the railhead (running surface) in alignment even though the rails are at different heights. In general, the maximum difference in weight between rails that can be "compromised" in a single step is 25 lb. A difference in rail weight of greater than 25 lbs. would need to be "compromised" in multiple steps.

### **17) Is Weighline available in rail sizes other than 115 lb/yd?**

Yes. Almost any size rail can be used for a Weighline but sizes other than the standard 115-lb may be subject to additional charges and longer delivery times.

### **18) Can Weighline be mounted on concrete or steel?**

Yes. Weighline can be easily mounted on steel or concrete as long as there is a minimum clearance of 1/2" between the rail bottom and the mounting surface.

### **19) What about damage from lightning strikes?**

Like any scale, the Weighline needs to be properly grounded as a system by keeping the rail sections and indicator at the same ground potential.

### **20) Can a Weighline system be used for in-motion weighing?**

Yes. The 1310 indicator or MS3000 control system are available for in-motion weighing.



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