

Are Your Scales Legal-for-Trade? Here's Why It Matters

In industries where goods are bought and sold based on weight, it is necessary to use scales that are legal-for-trade. Whether it's for a recycling center, a grocery store, or a manufacturing facility, legal-for-trade scales ensure that transactions based on product weight are reliable, fair, and in compliance with legal standards.

But what exactly does it mean for a scale to be legal-for-trade? And how can you make sure your scales are meeting all the necessary requirements to be considered legal-for-trade?

What Does "Legal-for-Trade" Mean for Scales?

A legal-for-trade scale (or, "trade approved scale") is a scale that has been certified to meet required accuracy and reliability standards. This certification is necessary when the scale is used in commercial transactions where goods are bought or sold based on weight.

Some examples of applications for legal-for-trade scales include

- Determining mass to calculate commercial transitions or for tax/tariff applications
- Determining price based on the weight of goods (it's important to note that laws for prepackaged goods are handled slightly differently. Thus a scale used to package a bag of potato chips doesn't need to be legal for trade, but local Weights and Measures officials are allowed to open several prepackaged bags, weigh the contents, and determine if the labeled weight is correct).
- Determining mass for analytical purposes (such as in pharmaceutical applications)

When a scale is legal-for-trade, it signifies that it has passed specific requirements needed to ensure that it can be trusted in commercial applications. For instance, if you're selling scrap by-products of your manufacturing process on your property, the scale used to weigh your materials must be legal-for-trade since it determines how much you will be paid for the materials.

Who Determines Legal-for-Trade Requirements?

In the United States, the requirements for legal-for-trade weighing equipment are delineated in Handbook 44 (Specific Tolerances and Other Technical Requirements for Weighing and Measuring Devices), published by the National Institute for Standards and Technology (NIST). Equipment is certified by the specified requirements under the National Type Evaluation Program (NTEP), a program administered by the National Council on Weights and Measures (NCWM), author of HB44. NTEP is a process for the testing and evaluation of weighing equipment and other critical components. NIST conducts NTEP testing on load cells and several State Weights and Measures even operate NTEP labs. This ensures compliance with the standards laid out in Handbook 44 and for scales used for trade.

NTEP defines "used for trade" as referring to weighing or measuring instruments used in selling,

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purchasing, exchanging, custody transfer, or establishing the cost for services/hire on the basis of a measurement. From nist.gov:

"NTEP requires industry to submit prototype weighing devices for evaluation to determine whether or not it meets the uncertainties which are related to tolerances associated with the intended final use in the marketplace. All devices sold in the United States for "legal for trade" purposes must pass these evaluations."

The Importance of Handbook 44 (HB44)

In the US, legal-for-trade scales must comply with Handbook 44 (HB44), which outlines the Specifications, Tolerances, and other Technical Requirements for Weighing and Measuring Devices. HB44 applies to all types of scales, such as truck scales, bench scales, and even precision balances. Further, it is enforced across all 50 states.

When a scale meets the standards set by Handbook 44, it ensures that the scale is capable of providing accurate and consistent measurements repeatedly. In turn, this prevents disputes and ensures fairness in transactional situations.

How to Check If Your Scale Is Legal-for-Trade

All legal-for-trade scales must be clearly marked with the appropriate certification. This may be in the form of a sticker, metal plate, or alternate form of identification displaying that the scale is NTEP approved. If the scale is not appropriately marked, it is not considered legal-for-trade and cannot be used in commercial transactions involving weight.

To ensure compliance, scales should be checked for the following

- NTEP Approval – legal-for-trade scales must be certified by the National Type Evaluation Program. This certification ensures that the scale has been tested to verify it meets the required standards for accuracy and reliability
- Identification – there should be some kind of identification or marking on the scale itself. Without this marking, the scale is not compliant with HB44. Marking requirements can be found in Table S.6.3-s of HB44. The serial plate must have the NTEP Certificate of Conformance (COC) number and be labeled with the accuracy class.

Do Legal-For-Trade Scales Have Required Calibration Needs?

While legal-for-trade scales are not required to be calibrated by a service company like Cross on a regular basis, there are considerations manufacturers must account for. For instance, state inspectors are not allowed to make adjustments to a scale. Thus, the scale either passes or fails.

If your scale fails state inspection, the device is tagged with a "fix-it ticket." A real-life example of

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this is gas stations with bags over individual dispensers. It's likely these were "tagged" by the state. Now, the customer is in a down situation with limited time to resolve the situation. Now technicians have to quickly be dispatched to place the scale back "in service" with the state. This also requires the use of a tighter acceptance tolerance. What's more, the state reserves the right to retest the scale within 30 days with those same tighter acceptance tolerances.

By having a company like Cross perform regular service, adjustments can be made to scales that are out of maintenance tolerance. Scales can also be adjusted to center even if they're just close to being out of maintenance tolerance. This ensures the state finds the scale in tolerance and the customer can continue to do business without interruption. Likewise, if a scale is found to be problematic over time, this information can be taken and used proactively to do something about it. For example, buying new equipment on a schedule that meets budgetary goals or repair equipment at a time that meets production demands.

Additional Requirements and Considerations

One other significant area of attention is the necessity of meeting the requirements of State Weights and Measures offices. All legal-for-trade scales must be placed in service with the Weights and Measures office within the jurisdiction of the area.

The requirements to meet these standards vary state-by-state, but generally a calibration service provider submits paperwork attesting that the scale has been tested to and passed the requirements laid out in HB44. The state reserves the option to retest the scale to verify accuracy.

Some states and some scales are tested on a regular basis by state inspectors. Further, in order to be placed in active service, some states charge the scale owner a device fee. Again, depending on the state and scale type, there may be additional requirements placed on the scale operator.

If you're unsure whether your scale is Legal-for-Trade or unsure if your operation is meeting the above requirements, contact your service provider or a professional scale service company, like Cross Company, to inspect and certify your scales.