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Direct Sales: Certifying Market Scales

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Virginia farmers sell their produce through many venues including on-farm sales, farm stands, and farmers' markets. Wherever the produce is sold, it must be sold by weight, count, head/bunch, or dry measure. If the produce is sold by weight, the produce will be weighed on scales that have been certified by the Virginia Department of Agriculture and Consumer Services Office of Weights and Measures.

The Office of Weights and Measures (OWM) is a regulatory agency housed within the Virginia Department of Agriculture and Consumer Services that administers consumer and environmental protection laws and regulations designed to maintain the integrity of transactions between buyers and sellers and prevent unfair competition among regulated industries. Activities include inspection and testing of all commercially used weighing and measuring equipment.


INSPECTING WEIGHTS AND MEASURES. 16th century

Inspection
The Virginia General Assembly established compliance language in the Code of Virginia §3.2-5620.

- *The specifications, tolerances, and regulations for commercial weighing and measuring devices, together with amendments thereto, as recommended by the National Institute of Standards and Technology, and published in the National Institute of Standards and Technology Handbook 44 and supplements thereto, or any publication revising, supplementing, or superseding Handbook 44, shall be the specifications, tolerances, and regulations for commercial weighing and measuring devices of the Commonwealth, except insofar as specifically modified, amended, or rejected by regulation issued by the Board. For purposes of this chapter, weights and measures shall be deemed to be in compliance with this chapter: (i) when they conform to all applicable requirements of Handbook 44 and supplements thereto, or any publication revising, supplementing, or superseding Handbook 44; or (ii) when they conform to any regulation adopted by the Board to modify, amend, or reject Handbook 44, as specified in this section. Other weights and measures shall not be in compliance*.

§3.2-5620.

The National Institute of Standards & Technology Handbook 44 (NIST H-44) is adopted by Virginia Code and is the reference for proper selection and use as well as the inspection criteria for all "commercial" weighing and measuring devices in Virginia.

Rejected or Condemned Devices
Section 3.2-5621 provides guidance when weights and measures have been rejected or condemned for repair:

- *Weights and measures that have been rejected or condemned for repair under the authority of the Commissioner, of an inspector, or of a sealer shall remain subject to the control of the rejecting authority until such time as suitable repair or disposition thereof has been made as required by this section. The owners of such rejected weights and measures shall cause the same to be made in compliance with this chapter within such time as may be authorized by the rejecting authority, or, in lieu of this, may dispose of the same, but only in such a manner as is specifically authorized by the rejecting authority. Weights and measures that have been rejected shall not again be used commercially until they have been officially re-examined by the rejecting authority, and found to be in compliance with this chapter, or until specific written permission for such use is issued by the rejecting authority.*

§3.2-5621

Depending on the results of an inspection by the Office of Weights and Measures and the basis for failure, devices are either "Approved," "Rejected," "Condemned for Repair," or "Condemned with Control". Rejected devices are given 10 days to be corrected and may be used during the 10 day period.

However, condemned devices must remain out of use until repaired or if "CwC" re-inspected and Approved by OWM. Some corrective repairs must be made by a VDACS licensed service agency technician. Authorized technicians may "place into service" corrected (or new) devices, and may remove and destroy "rejected" or "condemned" tags. Of course, the seller may purchase and put into service new devices from a licensed service agency.

Repairs should only be made by a licensed service agency or technician. A certified technician may place a device into service and remove rejected tags or condemned tags after corrective action. In addition, the certified technician must adjust any weight or measure as close to zero error as practicable.

Equipment Options
The scale type must match its weighing application as defined by the following chart.

- 2.20 U.R.1 Selection Requirements: *Equipment shall be suitable for the service in which it is used with respect to elements of its design, including but not limited to, its capacity, number of scale divisions, value of the scale division or verification scale division, minimum capacity, and computing capability.*

Typical Class or Type of Device for Weighing Applications

Class	Weighing Application or Scale Type
I	Precision laboratory weighing
II	Laboratory weighing, precious metals and gem weighing, grain test scales
III	All commercial weighing not otherwise specified, grain test scales, retail precious metals and semi-precious gem weighing, animal scales, postal scales, vehicle on-board weighing systems with a capacity less than or equal to 30 000 lb. and scales used to determine laundry charges
IIIL	Vehicle scales, vehicle on-board weighing systems with a capacity greater than 30,000 lb. axle-load scales, livestock scales, railway track scales, crane scales, and hopper (other than

	grain hopper) scales
IIII	Wheel-load weighers and portable axle-load weighers used for highway weight enforcement
Note: A scale with a higher accuracy class than that specified as "typical" may be used.	

- G.S.1 Identification
- All equipment, except weights and separate parts necessary to the measurement process but not having any metrological effect, shall be clearly and permanently marked for the purposes of identification with the following information:
    - (a) the name, initials, or trademark of the manufacturer or distributor;
    - (b) a model identifier that positively identifies the pattern or design of the device;
    - (c) a nonrepetitive serial number, except for equipment with no moving or electronic component parts and not built-for-purpose, software-based devices;
    - (e) an NTEP Certificate of Conformance (CC) number or a corresponding CC Addendum Number for devices that have a CC. The CC Number or a corresponding CC Addendum Number shall be prefaced by the terms "NTEP CC," "CC," or "Approval." These terms may be followed by the word "Number" or an abbreviation of that word. The abbreviation for the word "Number" shall, as a minimum, begin with the letter "N" (e.g., No or No.)
- The required information shall be so located that it is readily observable without the necessity of the disassembly of a part requiring the use of any means separate from the device.

In summary, this plate must have:

- Name or ID of manufacturer.
- Model or design.
- Model prefix as of 1/1/03.
- Non repetitive serial number.
- Serial number prefix as of 1/1/86.
- National Type Evaluation Program Certificate of Conformance prefix and number. (For devices that have a Certificate of Conformance as of 1/1/03)

Equipment Location

Scales must be located in such a manner that the customers are able to see the indicators, have a solid support in a level location where nothing touches the platform while in use, and are protected from the environment. These requirements are dictated by the following regulationsS.1.83 Customer's Indications, U.R.2.1 Supports, U.R.2.3 Protection from environmental factors, and U.R.2.4 Foundations, supports, and clearance.

- S.1.8.3. Customer's Indications
    - Weight indications shall be shown on the customer's side of computing scales when these are used for direct sales to retail customers.
    - Computing scales equipped on the operator's side with digital indications, such as the net weight, unit price, or total price, shall be similarly equipped on the customer's side.
    - Unit price displays visible to the customer shall be in terms of single whole units of weight and not in common or decimal fractions of the unit
- U.R.2.1. Supports
    - A scale that is portable and that is being used on a counter, table, or the floor shall be so positioned that it is firmly and securely supported.
    - Hanging scales shall be freely suspended from a fixed support that is capable of holding capacity weight when in use
- U.R.2.3. Protection From Environmental Factors

    - The indicating elements, the lever system or load cells, and the load-receiving element of a permanently installed scale, and the indicating elements of a scale not intended to be permanently installed, shall be adequately protected from environmental factors such as wind, weather, and RFI that may adversely affect the operation or performance of the device.
- U.R.2.4. Foundation, Supports, and Clearance
    - The foundation and supports of any scale installed in a fixed location shall be such as to provide strength, rigidity, and permanence of all components, and clearance shall be provided around all live parts to the extent that no contacts may result when the load-receiving element is empty, nor throughout the weighing range of the scale.

Wet Commodities
U.R.3.6 indicates that "wet commodities not in watertight containers shall be weighed only on a scale having a pan or platform that will drain properly.

Tare Weight
Tare weight means the weight of any wrapper, and any other vehicle, vessel, material or thing that is weighed with, but not an actual part of, a commodity sold by weight; thus, tare weight may include, in the case of a packaged commodity, a wrapper, container, packaging material, binding material, preservative, or the like, or in the case of bulk commodity, a vehicle, box, can, jar, or the like (§3.2-5600).

The seller must deduct the "tare," the dry, empty weight of any packaging, cup, bag, waxed sheet, etc used to hold the product while weighing commodities at the time of sale.

Equipment Maintenance
U.R.4.1 Balance Condition states: "The zero-load adjustment of a scale shall be maintained so that, with no load on the load-receiving element and with all load-counterbalancing elements of the scale (such as poises, drop weights, or counterbalance weights) set to zero, the scale shall indicate or record a zero balance condition. "

- A scale not equipped to indicate or record a zero-load balance shall be maintained in balance under any no-load condition.
- U.R.4.2. Level Condition: If a scale is equipped with a level-condition indicator, the scale shall be maintained in level condition.

For additional information or to secure a response to specific questions, please contact the Office of Weights and Measures (OWM) by calling 804.786.2476 or visiting http://www.vdacs.virginia.gov/standards/

Other Resources

- Code of Virginia. https://leg1.state.va.us/000/src.htm

- Going to Market. (2013). Virginia Cooperative Extension publication. http://www.pubs.ext.vt.edu/ANR/ANR-46/ANR-46_pdf.pdf