



Weights and Measures Division  
 14305 Southcross Dr #150  
 Burnsville, MN 55306-7011

651-539-1555 LAB 651-539-1565 FAX 952-435-4040

## Placing In Service Permit Holder Required Test Equipment List

Category of Equipment	Test equipment required for permit holder	Additional Test Equipment Needed by Permit Holders Employer
Class II Jewelry Scales		300 Gram polished stainless steel test kit including weights from 200 g down to 10 mg, meeting ASTM E617-97 Class 2 or 3 standards using corrections
Class III scales up to 50 lbs capacity.	30 lb test kit with decimal kit including weights down to .001 lbs, additional 20 lbs of test weights. Fractional or Metric kit optional.	
Class III scales, hopper and crane scales, with capacities > 50 lbs up to 300 lbs.	30 lb test kit with decimal kit including weights down to .001 lbs	Minimum of 300 lbs of test weights
Class III scales, hopper and crane scales, with capacities > 300 lbs up to 3,000 lbs.	30 lb test kit with decimal kit including weights down to .001 lbs. Fractional or Metric kit optional.	Minimum of 750 lbs of test weights
Class III scales, hopper and crane scales, with capacities > 3,000 lbs up to 40,000 lbs.	30 lb test kit including weights down to .1 lbs. Fractional or Metric kit optional. May be shared by 2 permit holders from 1 company	Minimum of 5000 lbs of test weights, including at least 250 lbs in 25, or 50 lb weights to check fractional poises
Class III scales, hopper and crane scales, with capacities > 40,000 lbs.	30 lb test kit including weights down to .5 lbs. Fractional or Metric kit optional. May be shared by 2 permit holders from 1 company.	Minimum of 10,000 lbs of test weights, including at least 250 lbs in 25, or 50 lb weights to check fractional poises. Additional test weight to meet the requirement for minimum test weights and test loads in NIST HB44, 2.20 Scales Table 4.
Livestock Scale	30 lb test kit including weights down to .5 lbs. Fractional or Metric kit optional. May be shared by 2 permit holders from 1 company.	Minimum of 10,000 lbs of test weights, including at least 250 lbs in 25, or 50 lb weights to check fractional poises. Additional test weight to meet the requirement for minimum test weights and test loads in NIST HB44, 2.20 Scales Table 4
Vehicle Scale	30 lb test kit including weights down to .5 lbs. Fractional or Metric kit optional. May be shared by 2 permit holders from 1 company.	Minimum of 10,000 lbs of test weights, including at least 250 lbs in 25, or 50 lb weights to check fractional poises. Additional test weight to meet the requirement for minimum test weights and test loads in NIST HB44, 2.20 Scales Table 4
Railway Track Scales	30 lb test kit including weights down to .5 lbs. Fractional or Metric kit optional. May be shared by 2 permit holders from 1 company.	Company is not required to own a rail test car, but the minimum test loads in NIST HB 44 2.20. Scale Code N.3.1.1. must be met when placing in service rail scales.

Belt Conveyor Scales	30 lb test kit including weights down to .5 lbs. Fractional or Metric kit optional. May be shared by 2 permit holders from 1 company.	Access to a reference scale meeting the requirements of NIST HB44,2.21 Belt Conveyor Scale Systems N.3.2, with detailed test report showing errors for the reference scale.
Retail Pumps	5 gallon test measure	
High Volume Retail Pumps	5 gallon test measure	Volumetric Prover with a volume larger than the amount delivered by the device in one minute at the maximum flow rate of the installation. NIST HB 44 3.30 Liquid Measuring Devices N.3.4.(b)
Vehicle Tank Meter		Volumetric Prover with a volume larger than the amount delivered by the device in one minute at its maximum discharge rate, and shall in no case be less than 50 gal. NIST HB 44 3.31. Vehicle-Tank Meters N.3.
Refinery or Terminal Meters		Volumetric Prover with a volume larger than the amount delivered by the device in one minute at the maximum flow rate of the installation. NIST HB 44 3.30 Liquid Measuring Devices N.3.5.
Mass Flow Meter Volumetric		Volumetric Prover with a volume larger than the amount delivered by the device in one minute at the maximum flow rate of the installation. NIST HB 44 3.30 Liquid Measuring Devices N.3.5.
Mass Flow Meter Gravimetric		Access to a reference scale calibrated to acceptance tolerance, with a division size 1/3 the size of the smallest tolerance applied, and a detailed report showing errors for the reference scale. 30 lb kit or metric equivalent for corrections.
LPG Meters/Inspector		Volumetric Prover with a volume larger than the amount delivered by the device in one minute at the maximum flow rate of the installation. NIST HB 44 3.32 LPG and Anhydrous Ammonia Liquid Measuring Devices N.3. A calibrated thermometer with division size of 1 °F or less, or metric equivalent

Field Standard Weights for Class III, and IIIIL scales must meet the requirements in NIST Handbook 105-1 Specifications and Tolerances for Field Standard Weights

Weight carts must meet NIST Handbook 105-8 and are not to be used alone as a standard.

The following example of a 30 lb and decimal kit is an example and does not limit acceptable denominations; 30lb test kit may include; 5-5lb, 2-2lb, 1-1lb. A possible list of standards in a decimal kit may include; 1- 0.5lb, 2- 0.2lb, 1- 0.1lb, 1- 0.05lb, 2- 0.02lb, 1- 0.01lb, 1 - 0.005 lb, 2 - 0.002 lb, and 1 - 0.001 lb; fractional kits should include standards down to 1/32 oz

Volumetric field standards must conform to the requirements of NIST Handbook 105-3 Specifications and Tolerances for Graduated Neck

Volumetric field standards for LPG must conform to the requirements of NIST Handbook 105-4 Specifications and Tolerances for Liquefied Petroleum Gas and Anhydrous Ammonia Liquid Volumetric Provers.