

SPECIFICATION
FOR
STANDARDS OF CAPACITY
(WORKING STANDARDS AND TEST EQUIPMENT)

In accordance with section 5(5) of the Weights and Measures Act 1985, the Secretary of State hereby approves the material and form of working standards and test equipment conforming to this Specification for use when testing measuring instruments used for dispensing liquid fuels excluding LPG.

S J Bennett
National Weights and Measures Laboratory
Stanton Avenue
Teddington
Middlesex TW11 0JZ

Department of Trade and Industry

SPECIFICATION FOR STANDARDS OF CAPACITY (WORKING STANDARDS AND TEST EQUIPMENT)

DEFINITION

1 This Specification applies to volumetric vessels which are located within a vehicle so as to be transportable. The document covers only the metrological aspects of the design and does not consider safety when the vessels are used with flammable liquids or in a hazardous environment.

NOMINAL CAPACITIES

2 The vessels shall have nominal capacities of 150, 100, 50, 20, 10, 5 and 2 litres only. Any combination of one or more standards is acceptable.

MATERIAL

3 The main bodies of the measures shall be made of stainless steel, aluminium alloy or mild steel suitably treated to prevent corrosion.

GENERAL CONSTRUCTION

The measure shall have the following general features:

4 The main body to be of circular cross-section which may be tapered. The strength of the vessel shall be adequate to resist deformation when filled with water;

5 The minimum sensitivity of the vessels shall be as in the table below:

Nominal volume (litres)	Minimum sensitivity of neck or sight glass (mm/mL)
2	2.5
5	1
10	0.5
20	0.25
50	0.1
100	0.05
150	0.033

6 The measures shall be sufficiently strong and robust to withstand normal usage.

7 The measures shall not leak.

- 8 The measures shall have smooth interior surfaces.
- 9 The design of the vessels and their orientation shall be such that no air is trapped on filling and minimal liquid retained on emptying.
- 10 Where outlet or overflow pipes are linked or connected to a manifold, the design shall be such that no liquid can pass from one measure to another.
- 11 The measures or the frame to which they are rigidly attached shall have a spirit level or other level indicating device attached.
- 12 Means must be provided for levelling the measures so that, for any reasonable inclination of the surface on which the vehicle is standing, the measures can be levelled to a degree such as not to impair their metrological properties.
- 13 Where measures incorporate a calibration unit in the form of an adjustable plug, such a device must be of a design which does not trap liquid or seriously impede drainage and must be fitted with a sealing mechanism to prevent tampering or inadvertent movement.
- 14 For each vessel, the graduated scale alongside the measurement tube may be fixed or adjustable. Where it is adjustable, means shall be provided for sealing it in position after calibration.
- 15 The scales shall be of sufficient length to indicate the permitted limits of error for inspection.
- 16 Scale marks may be marked in millilitres (ml), in terms of percentage of nominal volume or both.

INSCRIPTIONS

- 17 The following inscriptions shall be marked permanently, legibly and conspicuously on each measure or on a data plate affixed to a measure or frame:

The nominal volume, or volumes;

IN 20°C [alternatively, To contain 10L (or 2L, 5L, 20L, 50L, 100L, 150L) at 20°C];

A serial number;

Drainage time;

The name of the Local Authority.

Additionally the name or trade mark of the manufacturer may be marked on the measure.