

3. TEST EQUIPMENT

Subject to Section 6 (Substitute Materials) the test equipment will comprise sufficient test weights to load the machine at all the test points.

Test weights will be needed of a class which is suitable for the machine being calibrated. Test weights will generally be drawn from four of the nine classes defined in the OIML Recommendation R111 2004 which specifies tolerances for weights in the range 0.001g to 5000 kg. The maximum permissible error for test weights is shown in Annex A.

All test weights shall be in a clean condition and when not in use should be stored in conditions which are not likely to affect their accuracy. Iron weights should be stored in dry conditions. Weights of classes F2 and higher must be handled with tweezers, chamois leather cloths or gloves.

The total of the errors on the weights used for the calibration of a machine shall not be greater than 1/3 of the maximum allowable error of the machine at the applied load.

Where a facility to increase the displayed resolution of the machine is provided, it may be used during the calibration and a comment to that effect should be made on the calibration certificate.

Suggested suitable classes of weights:

Class II instruments with more than 20,000 scale intervals:	F ₁ or higher
Class II instruments with not more than 20,000 scale intervals:	F ₂ or higher
Class III and Class IIII instruments	M ₁ or higher

All test equipment should have a current certificate of calibration or certificate of accuracy traceable to national or international standards.

The calibration procedure for the test weights will require that the weights are calibrated either by a Weights and Measures Department, in which case the testing, adjustment and re-testing of the weights will be carried out in accordance with the current legislative requirements for Working Standards and Testing Equipment, or by a UKAS accredited laboratory in which case the testing, adjustment and re-testing will be carried out in accordance with the calibration procedures of the laboratory concerned.

Factors to be taken into account when determining the calibration frequency for weights will include the amount and type of use, whether the weights have been subject to damage which may have affected the validity of their calibration, and the variation in value between calibrations.

Recommended maximum interval between calibration:

E ₂ and F ₁ weights	-	2 years
Other weights	-	12 months

Calibration certificates for test weights must be kept for sufficient time to demonstrate that the weight values are stable; records should be kept for at least two previous calibrations. In the case of new weights the date they are brought into service shall be noted.