



# Technical Bulletin 4

## Guidance On The Requirements For Equipment Calibration For PIPA Inspectors

Technical Bulletin	4
Title	Guidance on the requirements for equipment calibration for PIPA inspectors
Date	October 2022

### Guidance on the requirements for equipment calibration for PIPA inspectors

As a part of ongoing improvements to the PIPA inspection scheme it is now required for all inspectors to have certain essential test equipment calibrated and for the certificates relating to these specific pieces of equipment to be presented to the PIPA management where it will be validated and kept on file.

This is required of all new inspectors and existing member will be expected to provide suitable calibration certificates when renewing their membership.

#### **A – What essential equipment must be calibrated for PIPA Inspections and copies of current calibration certificates supplied at the time of PIPA membership renewal?**

1. **Portable Appliance Tester**
2. **Digital and mechanical manometer (not U-gauge type)**
3. **Anchorage load testing, load cell, scales or dynamometer**
4. **Digital or mechanical inclinometer or level**

The above equipment is considered safety critical to the PIPA inspection process and inspectors must have in date calibration certificates for these.

Calibration of this essential equipment may well be questioned during an internal investigation, or if an investigation by an outside body such as the HSE should take place.

#### **A.1 – What optional equipment must be calibrated for PIPA Inspections?**

5. Any digital measuring device such as vernier calliper
6. Laser measuring devices

Items five and six have non digital options that inspectors may select to use.

## B - Why calibrate?

**Calibration is vital wherever measurements are important, it enables operators and inspectors to have confidence in the results that they monitor and record.**

Calibration is the process of comparing a reading on one piece of equipment or system, with another piece of equipment that has been calibrated and referenced to a known set of parameters within a testing and calibration laboratory.

The equipment used as a reference should itself be directly traceable to equipment that is calibrated according to ISO/IEC 17025.

ISO/IEC 17025 is the international standard for the accreditation of testing and calibration laboratories, it includes quality management system requirements along with technical requirements.

In the UK, ISO/IEC 17025 accreditation is provided by UKAS, often calibration performed by an ISO/IEC 17025 accredited laboratory is referred to as 'UKAS Calibration'.

## C - How often?

The specified inspection equipment must be calibrated before its first use and then every 12 months with certificates being presented to PIPA on commencement of membership as an inspector and then every 12 month or at membership renewal.

## D - Who can calibrate?

Calibration must be completed by a professional calibration service that is ISO/IEC 17025 "UKAS" accredited.

Calibration laboratories are easily located, there are independent laboratories around the country and many specialist retail companies that provide such equipment may offer a calibration services.

**UKAS accredited calibration services in the UK can be located using the UKAS website search facility at <https://www.ukas.com/find-an-organisation/>.**

## E – What happens if a piece of equipment fails a calibration?

Equipment that does not have a current, positive test certificate or fails a calibration test must not be used in connection with a PIPA inspection before it has been repaired and passed a subsequent test.

## F - Other equipment

While at present PIPA only require the stated equipment to be calibrated, the industry is evolving, and new equipment and methods will undoubtedly appear.

PIPA is monitoring the situation and when its considered necessary other items of equipment may be added to the list of items requiring calibration.

Inspectors may choose to have other items of their test equipment calibrated, but there is no requirement to pass such certificates to the PIPA office.

It is recommended that inspectors are confident in the quality of all their inspection equipment and take care to keep all equipment used for inspections in a good and accurate condition.

#### 1 - Linear tape measures have three accuracy levels

- a. **EC Class I:** These are the most accurate tape measures on the market. They tend to be slightly more expensive than the average DIY tool but are perfect for professional work where precision is essential. The maximum error expected in class I tapes is of 1.1 mm in 10 metres – 0.001% of margin
- b. **EC Class II:** Providing slightly less accurate measurements than class one, but still significantly more precise than the average commercial tape. Suitable for most uses, the maximum error expected over 10 metres total length is 2.30 millimetres – slightly more than 0.002%
- c. **EC Class III:** The least accurate on the scale, therefore they might be preferred where a difference of a few millimetres does not make a difference to the overall project. The maximum margin of error on a 10-metre-long measure is 4.60 millimetres – 0.004% difference

The above is supplied for reference only and PIPA will not be asking for inspectors to supply proof as to which they use for their inspections. The differentials between these grades will not noticeably affect the outcomes.

**No professional verification/calibration required.**

**This is essential equipment**

#### 2 – Long spirit level

Does not require calibration, however the quality of the reading provided by these can vary greatly and some cheaper examples can be a fair way from level.

These tools also require careful handling and storage with regular checks to ensure they remain accurate.

**No professional verification/calibration required.**

**This is essential equipment**

#### 3 – Laser distance measure

A highly versatile and useful piece of equipment that many inspectors make use of and are particularly useful for inspections of larger equipment.

**Professional verification/calibration required.**

**Not essential equipment**

#### 4 – Vernier calliper and rigid linear measures

Verniers are used by many inspectors for measuring smaller items such as the stitch length, other inspectors choose to use a tool such as a steel rule and this is equally acceptable for the PIPA scheme.

The Vernier calliper is a very useful tool and is available in both digital and analogue types.

**Professional verification/calibration required. (Digital)**

**No professional verification/calibration required. (Analogue)**

**Not essential equipment**

#### 5 – Height measuring sticks

These items are very useful for accurately measuring heights of inflatables, they are widely available in heights up to 5 metres. As with other items of linear measurement equipment they do not require calibration.

**No professional verification/calibration required.**

**Not essential equipment, however highly recommended and accurate**

#### 6 – Weights

Only weight stamped equipment may be used and PIPA will accept the type supplied for use in fitness facilities and home gyms such as barbell weights.

Required weights must allow for the following weight packages.

25kg – 35kg – 65kg – 85kg

**No professional verification/calibration required.**

**This is essential equipment**

#### 7 – Probes

Probes used for the inspection of inflatables as a part of the PIPA scheme must conform to the details set out in annex D of BS/EN 14960 part 1 2019

**No professional verification/calibration required.**

**This is essential equipment**

#### 8 - Anemometers

While not required for the PIPA inspection process many inspectors carry such equipment, if this is used to offer advice then an inspector should consider having this calibrated.

**Optional professional verification/calibration required.**

**Not essential equipment**