

# Calibration of Portable Calibrators

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## Key Words

Calibration, Pressure, Electrical, Temperature, NATA, Services

## Goal

Calibration is a set of operations that under certain conditions establish relations between values indicated by a measuring instrument or system, or values represented by a materialised measure or reference material, and values realised by measurement standards (VIM 1993\*, 6.11).

## Introduction

Industrial sites and manufacturing facilities use a wide range of temperature, electrical and pressure transducers and sensors. In order to ensure correct plant operation sensors need to be tested and calibrated regularly to ensure they meet performance specifications. Failure to do so could result in costly production downtime, safety issues or product quality issues.

Frequently compact calibrators such as the Druck DPI620/G are used to perform electrical, temperature, frequency and pressure calibrations. However, their performance is only as good as their last calibration. This is why the manufacturer recommends regular calibration by an accredited calibration laboratory, such as that operated by Thermo Fisher Scientific.

Thermo Fisher Scientific is NATA accredited for a wide range of calibration parameters and is therefore able to provide the highest level of confidence for the user of calibration instrumentation.

## What instruments can be calibrated:

Thermo Fisher Scientific is able to provide NATA calibration services for a wide range of portable calibrators including the following brands:

GE Druck, Cystal, Beamex, Kyoritsu, Fluke, Megger, Transmaton, HP, Agilent & Yokogawa



## What parameters can be calibrated?

### Pressure

Our purpose built, NATA accredited pressure laboratory enables us to provide high accuracy measurement and a certified uncertainty of 25 parts per million (ppm). We can calibrate pressure equipment from as low as -100kpa and as high as 70,000kpa. NATA calibration calls for calibration across X points with a linearity of X%

### Electrical

Our NATA accredited electrical laboratory is used for the calibration of general purpose, low frequency electrical equipment. We can calibrate instruments to an accuracy of 10-20ppm for Volts, 30-160ppm for Current, 30ppm for Resistance and 0.01% for frequency. . NATA calibration calls for calibration across X points with a linearity of X%



### Heat & Temperature

Our NATA accredited heat and temperature laboratory is temperature and humidity controlled and capable of actual and simulated temperatures to accuracy of 0.05°C. . NATA calibration calls for calibration across X points with a linearity of X%

The laboratory is also capable of humidity measurements from 10% to 90% at accuracy of 2%.

### Frequency of calibration

NATA recommends that the end user of the equipment judge their own calibration frequency based on their individual knowledge of their process and how critical accurate measurements are. Manufacturers' of calibration equipment typically recommend at least an annual calibration.

### Why NATA accreditation?

NATA is the authority responsible for the accreditation of laboratories, inspection bodies, calibration services, producers of certified reference materials and proficiency testing scheme providers throughout Australia.

NATA provides independent assurance of technical competence through a proven network of best practice industry experts for customers who require confidence in the delivery of their products and services. NATA formally recognises that these facilities produce reliable technical results. Insisting that your instruments are NATA calibrated helps ensure the highest level of performance and traceability.

### Why choose us?

- One service number linking you to 80+ service engineers, administrators and management with collective experience of over 650 years
- Fast response to emergency downtime situations
- Dedicated service teams located in Melbourne, Sydney, Queensland and Western Australia
- Spare parts distributed through our global network of self manufactured products and supplier partners
- Factory trained service engineers who have the constant support from our extensive global reach and supplier partner portfolio

### Other calibration services

Thermo Fisher Scientific can provide a wide range of calibration and maintenance services for an extensive range of instrumentation which includes:

- Gas Detectors – flammable & toxic
- Water quality instrumentation
- Viscometers & refractometers
- Balances – industrial & laboratory
- Other laboratory & industrial instrumentation

References: \*VIM 1993: Vocabulaire international des termes fondamentaux et généraux de métrologie, joint issue ISO/IEC/OIML/BIPM, 1993.

For more information visit: [www.thermofisher.com.au/calibration](http://www.thermofisher.com.au/calibration)

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