

## **Calibration Protocol**

### Calibration Protocol

We would like to inform you about service orders you send to TPF Control.  
It concerns ISO 17025 accredited calibrations according to our scope of accreditation.

If you send an instrument to us for calibration we will perform the following services;

1. As-Found comparisons; three or more points, model / make dependent
2. Service and repair
3. As-Left (post) comparisons; three or more points, model-dependent
4. Traceable calibration certificates
5. Apply the latest version of our scope with regard to uncertainty.

### **What it all means;**

#### **1. As-Found and As-Left comparisons**

The comparison of your product to our lab standard.

We perform one series of comparisons when we receive your product, and one series before it is return-shipped.

As a calibration laboratory accredited to ISO 17025 we follow the ISO Guide to the Expression of Uncertainty in Measurements (GUM). Our calibrations are performed by trained personnel following controlled test methods and procedures. The results are printed to As-Found (pre) and As-Left (post) calibration certificates.

Though calibration often is interpreted as an adjustment that restores an instrument to its original tolerance, calibration is the comparison of a value indicated by the Device Under Test (DUT) and the corresponding value of a (higher) standard.

#### **2. Calibration method (Lab and on-site)**

The calibration methods we use have been proven and validated by the Dutch council of accreditation (RvA). By default Flow Devices (except for flow calibrators) are calibrated with working standards to prevent pollution of reference meters. The use of working standards results in a higher uncertainty. Upon request calibration can be performed with master references.

#### **3. Service and repair**

If necessary and applicable, your product is disassembled to its core components. We inspect each component for wear, defect, contaminants and damage and then clean, repair or replace as necessary.

At the same time, if applicable, we upgrade hardware that was improved since you last purchased or serviced your product.

Once your product is reassembled, it's ready for its As-Left calibration.

If your product fails any points in this test, it must be disassembled again and the maintenance process continued until your product passes our As-Left calibration.

#### **Recertification warranty**

We warrant our service, labor and parts replacements against failure for a period of 90 days from the last date of recertification, provided your product has been used under normal operating conditions and that the failure is directly related to labor performed or parts installed during the last recertification.

**Terms and conditions****1. Delivery time:**

Delivery time of calibration will be one max 14 days unless stated otherwise.  
The calibration certificate will be shipped together with the instrument(s).

**2. Pricing:**

Pricing of calibration is through our standard pricelist which is available on request.  
Pricing of non standard items on request.

**3. Shipping:**

The instruments will be shipped back using the packaging that the instruments were shipped in to TPF.

If this is not possible TPF will ensure proper packing of the instrument to ensure instrument/calibration integrity.