



# **TURKISH TECHNIC CALIBRATION LABORATORY**

## **PRICE LIST**

- **Electricity**
- **Time / Frequency**
- **Temperature / Humidity**
- **Dimensional**
- **Pressure**
- **Torque**
- **Force**
- **Optical**
- **Mass, Weighing Scale**
- **Avionics**

**The Turkish Airlines Technic Inc. calibration laboratory is compliant with the requirements of TS EN ISO/IEC 17025 : 2017-12, ISO 10012, ISO 9001, AS9100 standards.**

The Turkish Airlines Technic Inc. Calibration Laboratory accredited by TÜRKAK under registration number AB-0092-K for ISO/IEC 17025:2017 as Calibration Laboratory.

Turkish Accreditation Agency (TURKAK) is a signatory to the European co-operation for Accreditation (EA) Multilateral Agreement (MLA) and to the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA) for the recognition of calibration certificates

Turkish Airlines Technic

Sabiha Gökçen Havalimanı E Gate No:3, Pendik

ISTANBUL/TURKEY

SALES: [TPSM@THY.COM](mailto:TPSM@THY.COM)

LABORATORY: [KALIBRASYON@THY.COM](mailto:KALIBRASYON@THY.COM)

+90 216 585 98 00

## Index of Contents

1.General Terms and Conditions.....	3
1.1 Terms.....	3
1.2 Definitions.....	4
2.Electrical, Time and Frequency Calibration.....	5
3.Temperature and Humidity Calibration .....	6
4.Dimensional Calibration.....	7
5.Pressure Calibration.....	9
6.Torque, Force, Optical, Mass, Weighing Scale Calibration .....	10
7.Special Devices Calibration For Aviation.....	11

## 1. General Terms and Conditions

### 1.1 Terms

Applicable law and jurisdiction	The governing law of the contract is the law of Turkey
Shipment	From Turkish Technic, Sabiha gokcen Airport at the expense and risk of the customer
Turn around time	Usually 5 working days. Shorter delivery time by arrangement.
Payment	30 days strictly net (Pre-payment for new customers)
Prices	<p>In USD, VAT is not included.</p> <p>The price includes cleaning as required to perform the calibration, verification, calibration sticker, calibration certificate.</p> <p>Prices and terms may vary according to current conditions. Contact with laboratory for more information.</p> <p>Additionally, in case of calibration is required to be performed onsite, then please note that transportation, accommodation, and other fees such as customs/paper fees, etc. for the equipment transactions will be charged.</p> <p>Additional fees are charged to customer as per request of Reporting Statement of Conformity. The proposal for additional fee is presented in case of request.</p> <p>Not included: Adjustment. For this extra work a fee of USD 100 / hr will be charged.</p>
Out of tolerance	If the measured values after calibration is out of tolerance and an adjustment is not possible, 100% of the calibration price will be charged.
Certificate	The certificate contains all necessary traceability information. All results are traceable to a national or international standard.
Technical manuals	Aircraft maintenance related customers are requested to refer to the associated service manuals so that the calibration can be carried out with the valid revision level of the Manuals can be performed. If you define your own specifications, we ask you for written confirmation with stamp and signature.

## 1.2 Definitions

- Metrology** Metrology is defined by the International Bureau of Weights and Measures (BIPM) as "the science of measurement, embracing both experimental and theoretical determinations at any level of uncertainty in any field of science and technology". It establishes a common understanding of units, crucial to human activity. Metrology is a wide reaching field, but can be summarized through three basic activities: the definition of internationally accepted units of measurement, the realisation of these units of measurement in practice, and the application of chains of traceability (linking measurements to reference standards)
- Traceability** Metrological traceability is defined as the "property of a measurement result whereby the result can be related to a reference through a documented unbroken chain of calibrations, each contributing to the measurement uncertainty". It permits the comparison of measurements, whether the result is compared to the previous result in the same laboratory, a measurement result a year ago, or to the result of a measurement performed anywhere else in the world. The chain of traceability allows any measurement to be referenced to higher levels of measurements back to the original definition of the unit. There is a calibration hierarchy.
- Calibration** Calibration is the set of operations that establish, under specified conditions, the relationship between the values of quantities indicated by a measuring instrument and the corresponding values realized by standards.
- Adjustment** Adjustment means, a measuring instrument to put or balance that the measuring divergences become very small or that the amounts of the measuring divergences do not cross the margins of error. Adjusting requires an intervention which changes the measuring instrument or the dimension embodiment mostly remainin.

## 2. Electrical, Time and Frequency Calibration



Device	Description	Calibration Price in USD
AC/DC Voltmeter	Panel Type	15
AC/DC Ammeter	Panel Type (up to 20 Amper)	15
AC/DC Wattmeter	Up to 20 kW	One Phase: 50 Three Phase: 75
Ohmmeter	Panel Type	15
Miliohmmeter	-	75
Frequency Meter	Panel Type	15
Multimeter	Up to 3 ½ digit	20
Multimeter	From 3 ½ digit to 6 ½ digit	80
Multimeter	8 ½ digit	300
Clampmultimeter	-	30
Clampmeter	-	30
Decade Resistance Box	-	60
Insulation Meter	Megger, Gossen Metrawatt so on...	60
Resistance, Shunt Resistor	-	40
AC/DC High Voltage Test Device	V <10 kVac V <15 kVdc	60
Power Supply	Up to 100 Amper	50
Oscilloscope	2 Channel	60
Oscilloscope	4 Channel	80
Timer/ Stopwatch	1 s ≤ t ≤ 3600 s	15
Multifunction Calibrator	Fluke 5500A so on...	700
Frequency Counter	-	70
Signal Generator	-	70
Gaussmeter	-	90
Optical Tachometer	-	50
Capacitance Meter	-	50



### 3. Temperature and Humidity Calibration



Device	Description	Calibration Price in USD
Thermometer	-40°C .....+1100°C with probe. 5 measurement points. (Additional measurement points + 10 USD)	30
Thermocouple	40°C .....+1100°	40
Resistance Thermometer	-25°C....650°C	40
Thermostat	-	30
Temperature Indicator	Electrical calibration one type channel (Additional channel + 10 USD)	30
Temperature Calibrator	Tc and PT100	40
Dry Block Calibrator	Up to +650 °C	75
Dry Block Calibrator	Up to +1000 °C	90
Humidity Meter	30 %rh ≤ RH ≤ 95 %rh	20
Temperature and Humidity meter	-	30
Deep Freeze	Single Temperature Value (Additional measurements point + 10 USD)	50
Oven	Single Temperature Value (Additional measurements point + 10 USD)	50
Incubator	Single Temperature Value (Additional measurements point + 10 USD)	50
Infrared Thermometer / Thermal Camera	-25 °C ≤ T ≤ 650 °C	60



## 4. Dimensional Calibration



Device	Description	Calibration Price in USD
Vernier Caliper / Depth Caliper	Up to 300 mm	15
	500 mm – 600 mm	20
	600 mm – 1500 mm	25
Micrometer	0 – 250 mm	15
	250 mm – 1500 mm	25
Tubular Micrometer (5 rods)		30
Pasometer		20
Inside Micrometer		20
Dial indicator (Analogue / Digital)	0 mm- 50 mm	40
	50 mm – 100 mm	60
Dial indicator (Horizontal type)		40
Thickness Gauge		20
Height Gauge	0 mm – 600 mm	30
	1000 mm	40
Johansson gauges	Until 500 mm	25
Go/no go gauge		25
Ring Gauge		25
Thread plug gauge		25
Pin gauge		10
Micrometer measuring rod	Up to 500 mm	20
Beveled-Edge Square		15
Feeler Gauge	(20 pcs)	30
Radius Gauge Set	(20 pcs)	30
Steel Ruler	0 mm – 3000 mm	20
Tape Ruler		15



Device	Description	Calibration Price in USD
Glass Ruler	Up to 200 mm	20
Steel/Bevel Protractor		30
Coating thickness gauge		30
Ultrasonic Coating Thickness Gauge		35
Calibration foils		10
Test Sieve		40



## 5. Pressure Calibration



Device	Description	Calibration Price in USD
Pressure Gauge, Vacuummeter	With DWT (0 – 200 bar)	60
Pressure Gauge, Vacuummeter	0 – 700 bar	15
Barometer		25
Mano/Vacuummeter		25
Absolute pressure Gauge		25



## 6.Torque, Force, Optical, Mass, Weighing Scale Calibration



Device	Description	Calibration Price in USD
Torque Wrench	1350 N.m Clockwise/counterclockwise	40
Force Gauge	Hand-held type	40
Force Gauge	Max 50 kN Max 100 kN	80 100
Loadcell and Spring Scales	Max 100 kN	100
Lux meter	Until 5000 lux	90
UV-A meter	Until 20000 $\mu\text{W}/\text{cm}^2$	90
Luminescent meter		90
Standard Weight	F and M type	25
Weighing Scale*	Up to 100 kg 100 kg – 1000 kg	100 200



\* Weighing scales are calibrated on site according to the standard.

## 7.Special Devices Calibration For Aviation



Device	Description	Calibration Price in USD
Air Data Test Set (ADTS)	ISO/IEC 17025 Accredited Calibration	1000
Crimping Tool	According to User Manual, Traceable Calibration, Additional Terminal +10USD	50
Tensiometer	According to User Manual, Traceable Calibration	100
Almen Gauge	According to User Manual, Traceable Calibration	50
Aircraft Scale	According to User Manual, Traceable Calibration	200
Crimping Die	According to User Manual, Traceable Calibration	30
Test Weight (lb) Non-Standard Weight	ISO/IEC 17025 Accredited Calibration	25
Bant-it Tool	According to User Manual, Traceable Calibration	100
Rat Test Kit	Certified Service Station of HYCOM	3800
Itcan Device	Certified Service Station of HYCOM	3800
Hotbonder	ISO/IEC 17025 Accredited Calibration	600

