



TURKISH ACCREDITATION AGENCY

## ACCREDITATION CERTIFICATE

As a Calibration Laboratory

### TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Central Address: SANAYİ MAH. HAVAALANI İÇ YOLU CAD. NO:3 PENDİK İstanbul / Türkiye

is accredited in accordance with TS EN ISO/IEC 17025:2017 standard within the scope given in Annex following the assessment conducted by TURKAK.

**Accreditation Number : AB-0092-K**

**Accreditation Date : 03.02.2012**

**Revision Date / Number : 07.06.2024 / 14**

This certificate shall remain in force until **09.02.2028**, subject to continuing compliance with the standard **TS EN ISO/IEC 17025:2017**, related regulations and requirements.

Gülden Banu Müderrisoğlu  
Secretary General



Turkish Accreditation Agency (TURKAK) is a signatory to the European co-operation for Accreditation (EA) Multilateral Agreement (MLA) and International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Agreement (MRA) in the scope of ISO/IEC 17025.

*This document has been signed by Gülden Banu Müderrisoğlu with a secure electronic signature in accordance with the electronic signature law numbered 5070. Use the QR code to verify the e-signed document.*

 Calibration TS EN ISO/IEC 17025 AB-0092-K	<b>TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ</b>  Accreditation Nr: AB-0092-K Revision Nr: 14 Date: 07.06.2024	
	<b>Calibration Laboratory</b>  <b>Address :</b> SANAYİ MAH. HAVAALANI İÇ YOLU CAD. NO:3 PENDİK İstanbul / Türkiye	
	<b>Phone :</b> +90 216 585 9800 <b>Fax :</b> +90 216 465 2558 <b>Email :</b> TTKGKEBISO17025@THY.COM <b>Website :</b> www.thyteknik.com.tr	

### Calibration and Measurement Capability (CMC)

#### Time and Frequency

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
<b>Signal and Pulse Characteristics</b> Horizontal Deflection (Time) Oscilloscope	$4 \text{ ns} \leq t < 40 \text{ ns}$	input impedance 50 $\Omega$ $U \leq 1 \text{ V}$	2,0 ms/s	<b>t:</b> Applied time interval (s) <b>U:</b> Applied peak-to-peak voltage (V) with Fluke 9500B
<b>Signal and Pulse Characteristics</b> Horizontal Deflection (Time) Oscilloscope	$40 \text{ ns} \leq t < 400 \text{ ns}$	input impedance 50 $\Omega$ $U \leq 1 \text{ V}$	2,9 ms/s	<b>t:</b> Applied time interval (s) <b>U:</b> Applied peak-to-peak voltage (V) with Fluke 9500B
<b>Signal and Pulse Characteristics</b> Horizontal Deflection (Time) Oscilloscope	$400 \text{ ns} \leq t < 4 \mu\text{s}$	input impedance 50 $\Omega$ $U \leq 1 \text{ V}$	1,4 ms/s	<b>t:</b> Applied time interval (s) <b>U:</b> Applied peak-to-peak voltage (V) with Fluke 9500B
<b>Signal and Pulse Characteristics</b> Horizontal Deflection (Time) Oscilloscope	$4 \mu\text{s} \leq t < 40 \mu\text{s}$	input impedance 50 $\Omega$ $U \leq 1 \text{ V}$	1,4 ms/s	<b>t:</b> Applied time interval (s) <b>U:</b> Applied peak-to-peak voltage (V) with Fluke 9500B
<b>Signal and Pulse Characteristics</b> Horizontal Deflection (Time) Oscilloscope	$40 \mu\text{s} \leq t < 400 \mu\text{s}$	input impedance 50 $\Omega$ $U \leq 1 \text{ V}$	4,4 ms/s	<b>t:</b> Applied time interval (s) <b>U:</b> Applied peak-to-peak voltage (V) with Fluke 9500B
<b>Signal and Pulse Characteristics</b> Horizontal Deflection (Time) Oscilloscope	$400 \mu\text{s} \leq t < 4 \text{ ms}$	input impedance 50 $\Omega$ $U \leq 1 \text{ V}$	2,3 ms/s	<b>t:</b> Applied time interval (s) <b>U:</b> Applied peak-to-peak voltage (V) with Fluke 9500B
<b>Signal and Pulse Characteristics</b> Horizontal Deflection (Time) Oscilloscope	$4 \text{ ms} \leq t < 40 \text{ ms}$	input impedance 50 $\Omega$ $U \leq 1 \text{ V}$	4,2 ms/s	<b>t:</b> Applied time interval (s) <b>U:</b> Applied peak-to-peak voltage (V) with Fluke 9500B
<b>Signal and Pulse Characteristics</b> Horizontal Deflection (Time) Oscilloscope	$40 \text{ ms} \leq t < 400 \text{ ms}$	input impedance 50 $\Omega$ $U \leq 1 \text{ V}$	1,1 ms/s	<b>t:</b> Applied time interval (s) <b>U:</b> Applied peak-to-peak voltage (V) with Fluke 9500B
<b>Signal and Pulse Characteristics</b> Horizontal Deflection (Time) Oscilloscope	$400 \text{ ms} \leq t < 1 \text{ s}$	input impedance 50 $\Omega$ $U \leq 1 \text{ V}$	1,8 ms/s	<b>t:</b> Applied time interval (s) <b>U:</b> Applied peak-to-peak voltage (V) with Fluke 9500B
<b>Signal and Pulse Characteristics</b> Band width Oscilloscope	$10 \text{ MHz} \leq \Delta f \leq 3,2 \text{ GHz}$	$U \leq 3$	$\%2,7 \cdot \Delta f$	<b><math>\Delta f</math>:</b> Measured bandwidth (Hz) <b>U:</b> Applied peak-to-peak voltage (V) with Fluke 9500B


 <p>Calibration TS EN ISO/IEC 17025 AB-0092-K</p>	<b>TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ</b>			
	Accreditation Nr: AB-0092-K Revision Nr: 14 Date: 07.06.2024			
	<b>Calibration Laboratory</b>			
<b>Address :</b> SANAYİ MAH. HAVAALANI İÇ YOLU CAD. NO:3 PENDİK İstanbul / Türkiye		<b>Phone :</b> +90 216 585 9800 <b>Fax :</b> +90 216 465 2558 <b>Email :</b> TTKGKEBISO17025@THY.COM <b>Website :</b> www.thytekNIK.com.tr		

<b>Frequency</b> Frequency Meters Frequency Counter	$0,1 \text{ Hz} \leq f < 10 \text{ Hz}$	Gate Time:10 s $U \leq 12 \text{ V}$ Sine Wave	$1,0 \cdot 10^{-5} \cdot f$	<b>f:</b> Measured frequency (Hz) <b>U:</b> Amplitude of the applied signal (V) GPS Rectified
<b>Frequency</b> Frequency Meters Frequency Counter	$0,1 \text{ Hz} \leq f < 10 \text{ Hz}$	Gate Time:10 s $U \leq 12 \text{ V}$ Square Wave	$1,0 \cdot 10^{-10} \cdot f$	<b>f:</b> Measured frequency (Hz) <b>U:</b> Amplitude of the applied signal (V) GPS Rectified
<b>Frequency</b> Frequency Meters Frequency Counter	$10 \text{ Hz} \leq f < 100 \text{ Hz}$	Gate Time:10 s $U \leq 12 \text{ V}$ Sine Wave	$1,8 \cdot 10^{-7} \cdot f$	<b>f:</b> Measured frequency (Hz) <b>U:</b> Amplitude of the applied signal (V) GPS Rectified
<b>Frequency</b> Frequency Meters Frequency Counter	$10 \text{ Hz} \leq f < 100 \text{ Hz}$	Gate Time:10 s $U \leq 12 \text{ V}$ Square Wave	$1,0 \cdot 10^{-10} \cdot f$	<b>f:</b> Measured frequency (Hz) <b>U:</b> Amplitude of the applied signal (V) GPS Rectified
<b>Frequency</b> Frequency Meters Frequency Counter	$100 \text{ Hz} \leq f < 1 \text{ kHz}$	Gate Time:10 s $U \leq 12 \text{ V}$ Sine Wave	$3,6 \cdot 10^{-8} \cdot f$	<b>f:</b> Measured frequency (Hz) <b>U:</b> Amplitude of the applied signal (V) GPS Rectified
<b>Frequency</b> Frequency Meters Frequency Counter	$100 \text{ Hz} \leq f < 1 \text{ kHz}$	Gate Time:10 s $U \leq 12 \text{ V}$ Square Wave	$1,0 \cdot 10^{-10} \cdot f$	<b>f:</b> Measured frequency (Hz) <b>U:</b> Amplitude of the applied signal (V) GPS Rectified
<b>Frequency</b> Frequency Meters Frequency Counter	$1 \text{ kHz} \leq f < 10 \text{ kHz}$	Gate Time:10 s $U \leq 12 \text{ V}$ Sine Wave	$3,6 \cdot 10^{-9} \cdot f$	<b>f:</b> Measured frequency (Hz) <b>U:</b> Amplitude of the applied signal (V) GPS Rectified
<b>Frequency</b> Frequency Meters Frequency Counter	$1 \text{ kHz} \leq f < 10 \text{ kHz}$	Gate Time:10 s $U \leq 12 \text{ V}$ Square Wave	$1,4 \cdot 10^{-11} \cdot f$	<b>f:</b> Measured frequency (Hz) <b>U:</b> Amplitude of the applied signal (V) GPS Rectified
<b>Frequency</b> Frequency Meters Frequency Counter	$10 \text{ kHz} \leq f < 100 \text{ kHz}$	Gate Time:10 s $U \leq 12 \text{ V}$ Sine Wave	$3,6 \cdot 10^{-10} \cdot f$	<b>f:</b> Measured frequency (Hz) <b>U:</b> Amplitude of the applied signal (V) GPS Rectified
<b>Frequency</b> Frequency Meters Frequency Counter	$10 \text{ kHz} \leq f < 100 \text{ kHz}$	Gate Time:10 s $U \leq 12 \text{ V}$ Square Wave	$1,4 \cdot 10^{-11} \cdot f$	<b>f:</b> Measured frequency (Hz) <b>U:</b> Amplitude of the applied signal (V) GPS Rectified
<b>Frequency</b> Frequency Meters Frequency Counter	$100 \text{ kHz} \leq f < 20 \text{ GHz}$	Gate Time:10 s $U \leq 12 \text{ V}$	$1,4 \cdot 10^{-11} \cdot f$	<b>f:</b> Measured frequency (Hz) <b>U:</b> Amplitude of the applied signal (V) GPS Rectified


 TÜRKAK  Calibration TS EN ISO/IEC 17025 AB-0092-K	<b>TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ</b>			
	Accreditation Nr: AB-0092-K Revision Nr: 14 Date: 07.06.2024			
	Calibration Laboratory			
Address : SANAYİ MAH. HAVAALANI İÇ YOLU CAD. NO:3 PENDİK İstanbul / Türkiye		Phone : +90 216 585 9800 Fax : +90 216 465 2558 Email : TTKGKEBISO17025@THY.COM Website : www.thytekNIK.com.tr		

<b>Frequency</b> Frequency Sources Frequency Generator	$0,1 \text{ Hz} \leq f < 10 \text{ Hz}$	Gate Time:10 s $U \leq 12 \text{ V}$ Sine Wave	$1,0 \cdot 10^{-5} \cdot f$	<i>f</i> : Measured frequency (Hz) <i>U</i> : Amplitude of the applied signal (V) GPS Rectified
<b>Frequency</b> Frequency Sources Frequency Generator	$0,1 \text{ Hz} \leq f < 10 \text{ Hz}$	Gate Time:10 s $U \leq 12 \text{ V}$ Square Wave	$1,0 \cdot 10^{-10} \cdot f$	<i>f</i> : Measured frequency (Hz) <i>U</i> : Amplitude of the applied signal (V) GPS Rectified
<b>Frequency</b> Frequency Sources Frequency Generator	$10 \text{ Hz} \leq f < 100 \text{ Hz}$	Gate Time:10 s $U \leq 12 \text{ V}$ Sine Wave	$1,8 \cdot 10^{-7} \cdot f$	<i>f</i> : Measured frequency (Hz) <i>U</i> : Amplitude of the applied signal (V) GPS Rectified
<b>Frequency</b> Frequency Sources Frequency Generator	$10 \text{ Hz} \leq f < 100 \text{ Hz}$	Gate Time:10 s $U \leq 12 \text{ V}$ Square Wave	$1,0 \cdot 10^{-10} \cdot f$	<i>f</i> : Measured frequency (Hz) <i>U</i> : Amplitude of the applied signal (V) GPS Rectified
<b>Frequency</b> Frequency Sources Frequency Generator	$100 \text{ Hz} \leq f < 1 \text{ kHz}$	Gate Time:10 s $U \leq 12 \text{ V}$ Sine Wave	$3,6 \cdot 10^{-8} \cdot f$	<i>f</i> : Measured frequency (Hz) <i>U</i> : Amplitude of the applied signal (V) GPS Rectified
<b>Frequency</b> Frequency Sources Frequency Generator	$100 \text{ Hz} \leq f < 1 \text{ kHz}$	Gate Time:10 s $U \leq 12 \text{ V}$ Square Wave	$1,0 \cdot 10^{-10} \cdot f$	<i>f</i> : Measured frequency (Hz) <i>U</i> : Amplitude of the applied signal (V) GPS Rectified
<b>Frequency</b> Frequency Sources Frequency Generator	$1 \text{ kHz} \leq f < 10 \text{ kHz}$	Gate Time:10 s $U \leq 12 \text{ V}$ Sine Wave	$3,6 \cdot 10^{-9} \cdot f$	<i>f</i> : Measured frequency (Hz) <i>U</i> : Amplitude of the applied signal (V) GPS Rectified
<b>Frequency</b> Frequency Sources Frequency Generator	$1 \text{ kHz} \leq f < 10 \text{ kHz}$	Gate Time:10 s $U \leq 12 \text{ V}$ Square Wave	$1,4 \cdot 10^{-11} \cdot f$	<i>f</i> : Measured frequency (Hz) <i>U</i> : Amplitude of the applied signal (V) GPS Rectified
<b>Frequency</b> Frequency Sources Frequency Generator	$10 \text{ kHz} \leq f < 100 \text{ kHz}$	Gate Time:10 s $U \leq 12 \text{ V}$ Sine Wave	$3,6 \cdot 10^{-10} \cdot f$	<i>f</i> : Measured frequency (Hz) <i>U</i> : Amplitude of the applied signal (V) GPS Rectified
<b>Frequency</b> Frequency Sources Frequency Generator	$10 \text{ kHz} \leq f < 100 \text{ kHz}$	Gate Time:10 s $U \leq 12 \text{ V}$ Square Wave	$1,4 \cdot 10^{-11} \cdot f$	<i>f</i> : Measured frequency (Hz) <i>U</i> : Amplitude of the applied signal (V) GPS Rectified
<b>Frequency</b> Frequency Sources Frequency Generator	$100 \text{ kHz} \leq f \leq 20 \text{ GHz}$	Gate Time:10 s $U \leq 12 \text{ V}$	$1,4 \cdot 10^{-11} \cdot f$	<i>f</i> : Measured frequency (Hz) <i>U</i> : Amplitude of the applied signal (V) GPS Rectified

## Accreditation Scope

 <b>TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ</b> Accreditation Nr: AB-0092-K Revision Nr: 14 Date: 07.06.2024				
Calibration Laboratory				
Address : SANAYİ MAH. HAVAALANI İÇ YOLU CAD. NO:3 PENDİK İstanbul / Türkiye		Phone : +90 216 585 9800 Fax : +90 216 465 2558 Email : TTKGEBISO17025@THY.COM Website : www.thytekni.com.tr		
<b>Time Range</b> Interval Meters Time Difference Meter (Frequency Counter, Stopwatch, Timer)	-20 s/g ≤ t ≤ +20 s/g	-	0,069 s/g	t: Measured Daily Deviation (s/g) Direct Reading with Reference Calibrator
<b>Time Range</b> Interval Meters Time Difference Meter (Frequency Counter, Stopwatch, Timer)	1 s ≤ t ≤ 3600 s	-	0,027 s	t: Measured Time Interval (s) Comparison Method with Reference Frequency Meter
<b>Time Range</b> Interval Meters Time Difference Meter (Frequency Counter, Stopwatch, Timer)	1 s ≤ t ≤ 3600 s	-	0,057 s	on-site calibrations with stopwatch
<b>Frequency</b> Frequency Meters Tachometer	60 rpm ≤ ω ≤ 99900 rpm	0,01 rpm ≤ r ≤ 1 rpm	5,7 · 10 <sup>-6</sup> · ω + r rpm	ω: Measured RPM (rpm) r: Resolution With the help of the frequency applied to the Optical LED with the Fluke 5522A Calibrator

This document has been signed by Gülden Banu Müderrisoğlu with a secure electronic signature in accordance with the electronic signature law numbered 5070. Use the QR code to verify the e-signed document.

 <p>Calibration TS EN ISO/IEC 17025 AB-0092-K</p>	<p><b>TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ</b></p> <p>Accreditation Nr: AB-0092-K Revision Nr: 14 Date: 07.06.2024</p>
--	---

**Calibration and Measurement Capability (CMC)**

**Temperature**

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
<b>Temperature Meters With Indicator</b> Resistance	-40 °C ≤ T ≤ 70 °C	Climate Chamber	0,58 °C	Comparative Calibration Method (Ice Point uncertainty is included) <b>T: Measured Temperature</b>
<b>Temperature Meters With Indicator</b> Resistance	-25 °C < T < 150 °C	Liquid Bath	0,05 °C	Comparative Calibration Method (Ice Point uncertainty is included) <b>T: Measured Temperature</b>
<b>Temperature Meters With Indicator</b> Resistance	-95 °C < T < 140 °C	Block Calibrator	0,03 °C	Comparative Calibration Method (Ice Point uncertainty is included) <b>T: Measured Temperature</b>
<b>Temperature Meters With Indicator</b> Resistance	140 °C < T < 650 °C	Block Calibrator	0,1 °C	Comparative Calibration Method (Ice Point uncertainty is included) <b>T: Measured Temperature</b>
<b>Temperature Meters With Indicator</b> Thermocouple Sensor	-95 °C < T < 140 °C	Block Calibrator	0,08 °C	Comparative Calibration Method (Ice Point uncertainty is included) <b>T: Measured Temperature</b>
<b>Temperature Meters With Indicator</b> Thermocouple Sensor	140 °C < T < 650 °C	Block Calibrator	0,31 °C	Comparative Calibration Method (Ice Point uncertainty is included) <b>T: Measured Temperature</b>
<b>Temperature Meters With Indicator</b> Thermocouple Sensor	-40 °C < T < 70 °C	Climate Chamber	0,58 °C	Comparative Calibration Method (Ice Point uncertainty is included) <b>T: Measured Temperature</b>
<b>Temperature Meters With Indicator</b> Thermocouple Sensor	-25 °C < T < 260 °C	Liquid Bath	0,12 °C	Comparative Calibration Method (Ice Point uncertainty is included) <b>T: Measured Temperature</b>
<b>Temperature Meters With Indicator</b> Thermocouple Sensor	650 °C < T < 950 °C	Block Calibrator	1,6 °C	Comparative Calibration Method (Ice Point uncertainty is included) <b>T: Measured Temperature</b>
<b>Temperature Meters With Indicator</b> Thermocouple Sensor	950 °C < T < 1100 °C	Block Calibrator	2,1 °C	Comparative Calibration Method (Ice Point uncertainty is included) <b>T: Measured Temperature</b>
<b>Standard Platinum Resistance Thermometers</b> Platinum Resistive Thermometer (PRT)	-25 °C ≤ T ≤ 260 °C	Liquid Baths	0,05 °C	Comparative Calibration Method (Ice Point uncertainty is included) <b>T: Measured Temperature</b>
<b>Standard Platinum Resistance Thermometers</b> Platinum Resistive Thermometer (PRT)	-95 °C ≤ T ≤ 140 °C	Block Calibrator	0,03 °C	Comparative Calibration Method (Ice Point uncertainty is included) <b>T: Measured Temperature</b>



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>Standard Platinum Resistance Thermometers</b> Platinum Resistive Thermometer (PRT)	$140\text{ °C} \leq T \leq 650\text{ °C}$	Block Calibrator	0,1 °C	Comparative Calibration Method (Ice Point uncertainty is included) <b>T: Measured Temperature</b>
<b>Thermocouples</b>	$-40\text{ °C} \leq T \leq 70\text{ °C}$	Climate Chamber	0,66 °C	For K, J, E, T, R, S, N, U Type (Except B Type on Negative Temperature) (Ice Point Uncertainty is included) <b>T: Measured Temperature</b>
<b>Thermocouples</b>	$-25\text{ °C} \leq T \leq 260\text{ °C}$	Liquid Bath	0,33 °C	For K, J, E, T, R, S, N, U Type (Except B Type on Negative Temperature) (Ice Point Uncertainty is included) <b>T: Measured Temperature</b>
<b>Thermocouples</b>	$-95\text{ °C} \leq T \leq 140\text{ °C}$	Block Calibrator	0,1 °C	For K, J, E, T, R, S, N, U Type (Except B Type on Negative Temperature) (Ice Point Uncertainty is included) <b>T: Measured Temperature</b>
<b>Thermocouples</b>	$140\text{ °C} \leq T \leq 650\text{ °C}$	Block Calibrator	0,44 °C	For K, J, E, T, R, S, N, U Type (Except B Type on Negative Temperature) (Ice Point Uncertainty is included) <b>T: Measured Temperature</b>
<b>Thermocouples</b>	$650\text{ °C} \leq T \leq 1100\text{ °C}$	Block Calibrator	1,3 °C	For K, J, E, T, R, S, N, U Type (Except B Type on Negative Temperature) (Ice Point Uncertainty is included) <b>T: Measured Temperature</b>
<b>Other Measurement Services</b> Dry-Block Calibrators	$-40\text{ °C} < T < 650\text{ °C}$	Stability and Temperature Distribution Measurement	1,1 °C	According to EURAMET/cg-13 <b>T: Measured Temperature</b>
<b>Other Measurement Services</b> Dry-Block Calibrators	$650\text{ °C} < T < 1100\text{ °C}$	Stability and Temperature Distribution Measurement	1,4 °C	According to EURAMET/cg-13 <b>T: Measured Temperature</b>
<b>Controlled Volumes (Temperature Distribution)</b> Cold Room (Deep Freezer etc.) Climate Chamber Temperature Bath ETUV	$-95\text{ °C} < T < 150\text{ °C}$	Climate Chamber	1,8 °C	<b>T: Measured Temperature</b> Dakks DKD-R 5-7, Euramet cg-20, EN 60068-3-5, EN60068-3-11
<b>Controlled Volumes (Temperature Distribution)</b> Cold Room (Deep Freezer etc.) Climate Chamber Temperature Bath ETUV	$150\text{ °C} < T < 850\text{ °C}$	High Temperature Oven	3 °C	<b>T: Measured Temperature</b> Dakks DKD-R 5-7, Euramet cg-20, EN 60068-3-5, EN60068-3-11
<b>Controlled Volumes (Temperature Distribution)</b> Cold Room (Deep Freezer etc.) Climate Chamber Temperature Bath ETUV	$-25\text{ °C} < T < 280\text{ °C}$	Liquid Bath	0,05 °C	<b>T: Measured Temperature</b> Dakks DKD-R 5-7, Euramet cg-20, EN 60068-3-5, EN60068-3-11



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction ON	-200 °C < T < 1372 °C	K type	0,12 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction ON	-250 °C < T < 400 °C	T type	0,16 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction ON	-210 °C < T < 1200 °C	J type	0,13 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction ON	-250 °C < T < 1000 °C	E type	0,12 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction ON	0 °C < T < 1767 °C	S type	0,60 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction ON	0 °C < T < 1767 °C	R type	0,61 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction ON	-200 °C < T < 1300 °C	N type	0,16 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction OFF	-200 °C < T < 1372 °C	K type	0,11 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction OFF	-250 °C < T < 400 °C	T type	0,15 °C	<b>T: Measured Temperature</b> EURAMET/cg-11





## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction OFF	-210 °C < T < 1200 °C	J type	0,10 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction OFF	-250 °C < T < 1000 °C	E type	0,10 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction OFF	0 °C < T < 1767 °C	S type	0,60 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction OFF	0 °C < T < 1767 °C	R type	0,61 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction OFF	-200 °C < T < 1300 °C	N type	0,15 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators RTD (PT 100 vb.)	-200 °C < T < 800 °C	-	0,24 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction ON	-200 °C < T < 1372 °C	K type	0,15 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction ON	-250 °C < T < 400 °C	T type	0,21 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction ON	-210 °C < T < 1200 °C	J type	0,19 °C	<b>T: Measured Temperature</b> EURAMET/cg-11



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction ON	-250 °C < T < 1000 °C	E type	0,14 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction ON	0 °C < T < 1767 °C	S type	0,49 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction ON	0 °C < T < 1767 °C	R type	0,47 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction ON	-200 °C < T < 1300 °C	N type	0,16 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction OFF	-200 °C < T < 1372 °C	K type	0,14 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction OFF	-250 °C < T < 400 °C	T type	0,18 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction OFF	-210 °C < T < 1200 °C	J type	0,13 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction OFF	-250 °C < T < 1000 °C	E type	0,13 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b> Temperature Indicators Cold Junction OFF	0 °C < T < 1767 °C	S type	0,47 °C	<b>T: Measured Temperature</b> EURAMET/cg-11



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>Temperature Indicators and Calibrators</b>  Temperature Indicators  Cold Junction OFF	0 °C < T < 1767 °C	R type	0,47 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b>  Temperature Indicators  Cold Junction OFF	-200 °C < T < 1300 °C	N type	0,16 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Temperature Indicators and Calibrators</b>  Temperature Indicators  Sıcaklık Kalibratörü RTD (PT 100 vb.)	-200 °C < T < 800 °C	-	0,16 °C	<b>T: Measured Temperature</b> EURAMET/cg-11
<b>Industrial Radiation Thermometers</b>  Pyrometer Thermal camera IR Thermometer	-25 °C < T < 100 °C	With Bath	0,6 °C	Calibration Procedure prepared according to BS EN 12470-5 VDI VDE DGQ 3511 ASTM E 2847 <b>T: Ölçülen Sıcaklık [°C]</b>
<b>Industrial Radiation Thermometers</b>  Pyrometer Thermal camera IR Thermometer	50 °C < T < 300 °C	With IR Calibrator	1,8 °C	Calibration Procedure prepared according to BS EN 12470-5 VDI VDE DGQ 3511 ASTM E 2847 <b>T: Ölçülen Sıcaklık [°C]</b>
<b>Industrial Radiation Thermometers</b>  Pyrometer Thermal camera IR Thermometer	300 °C < T < 500 °C	With IR Calibrator	2,8 °C	Calibration Procedure prepared according to BS EN 12470-5 VDI VDE DGQ 3511 ASTM E 2847 <b>T: Ölçülen Sıcaklık [°C]</b>
<b>Industrial Radiation Thermometers</b>  Pyrometer Thermal camera IR Thermometer	500 °C < T < 650 °C	With IR Calibrator	3,8 °C	Calibration Procedure prepared according to BS EN 12470-5 VDI VDE DGQ 3511 ASTM E 2847 <b>T: Ölçülen Sıcaklık [°C]</b>
<b>Industrial Radiation Thermometers</b>  IR Ear Thermometer	34 °C < T < 42 °C	With Bath	0,15 °C	Calibration Procedure prepared according to BS EN 12470-5 VDI VDE DGQ 3511 ASTM E 2847 <b>T: Ölçülen Sıcaklık [°C]</b>
<b>Hygrometers</b>  Hygrometer Relative Humidity Meter (Datalogger) Relative Humidity Meter (Digital/Analog)	30 % rh ≤ RH ≤ 95 % rh	In Humidity and Temperature Chamber 15 °C ≤ T ≤ 30 °C	2 % rh	Comparative Calibration Method <b>RH: Measured Relative Humidity</b> <b>T: Measured Temperature</b>

## Accreditation Scope

<b>TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ</b>				
Accreditation Nr: AB-0092-K Revision Nr: 14 Date: 07.06.2024				
Calibration TS EN ISO/IEC 17025 AB-0092-K				
<b>Controlled Volumes (Relative Humidity Distribution)</b>  Climate Chamber Relative Humidity Source Sterilizer (Autoclave)	30 % rh $\leq$ RH $\leq$ 60 % rh	Central Relative Humidity Measurement (Single Point) 21 °C $\leq$ T $\leq$ 25 °C	1,6 % rh	<b>RH: Measured Humidity</b> <b>T: Measured Temperature</b> Dakks DKD-R 5-7, Eurametcg-20, EN 60068-3-5, EN 60068-3-6, EN 60068-3-11
<b>Controlled Volumes (Relative Humidity Distribution)</b>  Climate Chamber Relative Humidity Source Sterilizer (Autoclave)	60 % rh $\leq$ RH $\leq$ 95 % rh	Central Relative Humidity Measurement (Single Point) 21 °C $\leq$ T $\leq$ 25 °C	2,5 % rh	<b>RH: Measured Humidity</b> <b>T: Measured Temperature</b> Dakks DKD-R 5-7, Eurametcg-20, EN 60068-3-5, EN 60068-3-6, EN 60068-3-11

This document has been signed by Gülden Banu Müderrisoğlu with a secure electronic signature in accordance with the electronic signature law numbered 5070. Use the QR code to verify the e-signed document.



**TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ**

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

**Calibration and Measurement Capability (CMC)**

**Dimensional Quantities**

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
<b>Dimension Standards</b>  Gauge Block ( short 0.5 mm - 100 mm )	0,5 mm ≤ L ≤ 100 mm	Vertical Orientation	(0,12 + 9 · L) μm	Procedure according to VDI/VDE/DGQ 2618, Bl. 3.1, ASMEB89.1.9-2002 document  <b>L : Measured value</b>  Calibration is done in the laboratory.
<b>Dimension Standards</b>  Long Gauge Block ( Length Bar ) ( 125 mm- 1000 mm )	100 mm ≤ L ≤ 500 mm	Horizontal Orientation	(0,23 + 9 · L) μm	Procedure according to VDI/VDE/DGQ 2618, Bl. 3.1, ASMEB89.1.9-2002 document  <b>L : Measured value</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Dial Indicator (Comparator)	0 mm < L ≤ 100 mm	r: 0,001 mm	(1,5 + 20 · L) μm	Procedure according to VDI/VDE/DGQ 2618 Ch. part 11.1 document  <b>r: Resolution</b>  <b>L: Measured Length [m]</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Precision Comparator	0 mm < L ≤ 3 mm	r: 0,001 mm	1 μm	Procedure according to VDI/VDE/DGQ 2618 Ch. part 11.2 document  <b>r: Resolution</b>  <b>L: Measured Length [m]</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Secretion Comparator (Precision Examiner)	0 mm < L ≤ 2 mm	r: 0,001 mm	1 μm	Procedure according to VDI/VDE/DGQ 2618 Ch. part 11.3 document  <b>r: Resolution</b>  <b>L: Measured Length [m]</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Thickness Meter (Thickness Comparator)	0 mm < L ≤ 50 mm	r: 0,001 mm	(1 + 10 · L) μm	Comparison with Gauge Blocks  <b>r: Resolution</b>  <b>L: Measured Length [m]</b>  Calibration is done in the laboratory.



**TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ**

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>Handheld Basic Measuring Devices</b>  Thickness Meter (Thickness Comparator)	External Dimensions 0 mm < L ≤ 200 mm	r: 0,005 mm	(4 + 10 · L) μm	Procedure according to VDI/VDE/DGQ 2618 Parts 12.1 and 13.1  <b>r: Resolution</b> <b>L: Measured Length [m]</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Thickness Meter (Thickness Comparator)	Internal Dimensions 0 mm < L ≤ 100 mm	r: 0,05 mm	(6 + 10 · L) μm	Procedure according to VDI/VDE/DGQ 2618 Parts 12.1 and 13.1  <b>r: Resolution</b> <b>L: Measured Length [m]</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Caliper (External diameter, Internal diameter, Depth, Step measurements)	0 mm < L ≤ 500 mm	Internal and External Measurements, Depth and Step Measurement r: 0,01 mm	(7 + 13 · L) μm	Procedure according to VDI/VDE/DGQ 2618 Part 9.1 Documents  <b>r: Resolution</b> <b>L: Measured Length [m]</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Caliper (External diameter, Internal diameter, Depth, Step measurements)	500 mm < L ≤ 2000 mm	Internal and External Measurements, Depth and Step Measurement r: 0,01 mm	(10 + 20 · L) μm	Procedure according to VDI/VDE/DGQ 2618 Part 9.1 Documents  <b>r: Resolution</b> <b>L: Measured Length [m]</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Depth Caliper	0 mm < L ≤ 500 mm	r: 0,01 mm	(13 + 5 · L) μm	Procedure according to VDI/VDE/DGQ 2618 Part 9.2 Documents  <b>r: Resolution</b> <b>L: Measured Length [m]</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Depth Caliper	500 mm < L ≤ 1000 mm	r: 0,01 mm	(11 + 9 · L) μm	Procedure according to VDI/VDE/DGQ 2618 Part 9.2 Documents  <b>r: Resolution</b> <b>L: Measured Length [m]</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Height Measuring Device (Height Gauge)	0 mm < L ≤ 1000 mm	r: 0.001 mm	(3,1 + 20 · L) μm	Procedure according to VDI/VDE/DGQ 2618 Part 9.3 and 16.1 Documents  <b>r: Resolution</b> <b>L: Measured Length [m]</b>  Calibration is done in the laboratory.



**TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ**

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>Handheld Basic Measuring Devices</b>  Outer Diameter Micrometry	0 mm < L ≤ 500 mm	r: 0,001 mm	(1,5 + 12 · L) µm	Procedure according to VDI/VDE/DGQ 2618 Part 10.1 Documents  <b>r: Resolution</b>  <b>L: Measured Length [m]</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Outer Diameter Micrometry	500 mm < L ≤ 1500 mm	r: 0.01 mm	(3,5 + 12 · L) µm	Procedure according to VDI/VDE/DGQ 2618 Part 10.1 Documents  <b>r: Resolution</b>  <b>L: Measured Length [m]</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Passometer Scale	0 mm < L ≤ 500 mm	r: 0.001 mm	1 µm	Procedure according to VDI/VDE/DGQ 2618 Part 10.3 Documents  <b>r: Resolution</b>  <b>L: Measured Length [m]</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Passometer Scale	500 mm < L ≤ 1500 mm	r: 0.002 mm	1,5 µm	Procedure according to VDI/VDE/DGQ 2618 Part 10.3 Documents  <b>r: Resolution</b>  <b>L: Measured Length [m]</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Depth Micrometry	0 mm < L ≤ 300 mm	r: 0.001 mm	(1,5 + 8 · L) µm	Procedure according to VDI/VDE/DGQ 2618 Part 10.5 Documents  <b>r: Resolution</b>  <b>L: Measured Length [m]</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Two-Point Inner Diameter Micrometry	25 mm < L ≤ 590 mm	r: 0.001 mm	(1,2 + 3 · L) µm	Procedure according to VDI/VDE/DGQ 2618 Part 10.7 Documents  <b>r: Resolution</b>  <b>L: Measured Length [m]</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Three-Point Inner Diameter Micrometry	2,5 mm < L ≤ 205 mm	r: 0.001 mm	(2,3 + 2,1 · L) µm	Procedure according to VDI/VDE/DGQ 2618 Part 10.8 Documents  <b>r: Resolution</b>  <b>L: Measured Length [m]</b>  Calibration is done in the laboratory.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>Dimension Standards</b>  Micrometer Setting Bar [Flat, Screw]	25 mm < L ≤ 590 mm	-	(0,8 + 3,3 · L) μm	Procedure according to VDI/VDE/DGQ 2618 Part 4.4 Documents  <b>r: Resolution</b>  <b>L: Measured Length [m]</b>  Calibration is done in the laboratory.
<b>Diameter Standards</b>  Exterior Cylinder ( Bumper Mastar ( Ref, Pass- not pass, etc. ) Piston, Pin ( Screw Measuring Pins ) Wire, Setting Gauge )	0,2 mm ≤ D ≤ 100 mm	-	(1,1 + 15 · D) μm	Procedure according to VDI/VDE/DGQ 2618 Part 4.1 Documents  <b>D: Diameter [m]</b>  Calibration is done in the laboratory.
<b>Diameter Standards</b>  Internal Cylinder ( Ring Mastar ( Ref, Passes-not pass etc. ) )	1 mm ≤ D ≤ 305 mm	-	(1,1 + 20 · D) μm	Procedure according to VDI/VDE/DGQ 2618 Part 4.1 Documents  <b>D: Diameter [m]</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Snap Gauge (Inner , Outer)	5 mm < L ≤ 150 mm	-	(1 + 5 · L) μm	Procedure according to VDI/VDE/DGQ 2618 Part 4.7 Documents  <b>L: Measured Length [m]</b>  Calibration is done in the laboratory.
<b>Diameter Standards</b>  Gauge Pin and Screw Thread	0,1 mm ≤ D ≤ 20 mm	Steel	(0,8 + 2 · D) μm	Procedure according to VDI/VDE/DGQ 2618 Part 4.2 Documents  <b>D: Diameter [m]</b>  Calibration is done in the laboratory.
<b>Screw Standards</b>  Flat Screw Plug Gauge	Outer Screw Thread 1 mm ≤ D ≤ 100 mm	Step: 0,35 mm - 6 mm	4,50 μm	Procedure according to VDI/VDE/DGQ 2618 Bölüm 4.8, ISO 228, BS 919, ISO 1502, ANSI/ASME B1.1, B1.2 Documents  Go - NoGo Control  <b>D: Measured Part Diameter [m]</b>  Calibration is done in the laboratory.
<b>Screw Standards</b>  Flat Screw Ring Gauge	Inner Screw Thread 5 mm ≤ D ≤ 100 mm	Step: 0,35 mm - 6 mm	3,65 μm	Procedure according to VDI/VDE/DGQ 2618 Bölüm 4.8, ISO 228, BS 919, ISO 1502, ANSI/ASME B1.1, B1.2 Documents  Go - NoGo Control  <b>D: Measured Part Diameter [m]</b>  Calibration is done in the laboratory.





**TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ**

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>Angle Measuring Devices</b>  (Bevel) Protractor	$\alpha \leq 360^\circ$	Measurement Arm Until 300 mm	1'	Procedure according to VDI/VDE/DGQ 2618 Part 7.2 Documents  <b>a: Açı</b>  <b>L: Measured Length [m]</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Radius Gauges	$1 \text{ mm} < L \leq 25 \text{ mm}$	-	14,5 $\mu\text{m}$	Optical Measurement Method  <b>r: Radius</b>  Calibration is done in the laboratory.
<b>Dimension Standards</b>  Thickness gauge (Synthyl etc.(Feeler Gauge))	$0,03 \text{ mm} < L \leq 2 \text{ mm}$	-	0,5 $\mu\text{m}$	Procedure according to DIN 2275 Documents  <b>L: Thickness</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Steel Ruler	$0 \text{ mm} < L \leq 500 \text{ mm}$	-	(14 + 5 · L) $\mu\text{m}$	Optical Measurement Method  Comparison Method with Reference Ruler  Procedure according to DIN 865, DIN 866 Documents  <b>L: Length</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Steel Ruler	$0 \text{ mm} < L \leq 3000 \text{ mm}$	-	(93 + 18 · L) $\mu\text{m}$	Optical Measurement Method  Comparison Method with Reference Ruler  Procedure according to DIN 865, DIN 866 Documents  <b>L: Length</b>  Calibration is done in the laboratory.
<b>Dimension Standards</b>  Type Meter	$0 \text{ mm} < L \leq 50 \text{ m}$	-	(82 + 18 · L) $\mu\text{m}$	Procedure according to TS 9505 Documents  <b>L: Length</b>  Calibration is done in the laboratory.
<b>Reference Materials</b>  [Sieve, Mesh] Aperture (Aperture)	$20 \mu\text{m} \leq L \leq 125 \text{ mm}$	Mesh Range	13 $\mu\text{m}$	Procedure according to ISO 3310 Documents  <b>L: Measured Mesh Gap Value</b>  Calibration is done in the laboratory.
<b>Coating Thickness</b>  Coating Thickness Standard (Thickness Foils)	$7 \mu\text{m} \leq L \leq 8000 \mu\text{m}$	-	0,7 $\mu\text{m}$	DIN EN ISO 2178  <b>L: Thickness</b>  Calibration is done in the laboratory.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>Handheld Basic Measuring Devices</b>  Ultrasonic Thickness Meter	0 mm < L ≤ 100 mm	r: 0,001 mm	5 µm	Gauge Measurement Method <b>r: Resolution</b>  Calibration is done in the laboratory.
<b>2 -Dimension 3-Dimension Measuring Devices</b>  Profile Projection	0 mm ≤ L ≤ 200 mm	r: 0,001 mm	$(7,2 + 7 \cdot L) \mu\text{m}$	VDI/VDE/DGQ 2617  Length Scale Control <b>L: Measured Length</b> <b>r: Resolution</b>  Calibration is done in the laboratory.
<b>Coating Thickness</b>  Coating Thickness Measuring Device	0 mm ≤ L ≤ 2 mm	r: 0,001 mm	2,5 µm	DIN EN ISO 2178 <b>L: Measured Thickness</b> <b>r: Resolution</b>  Calibration is done in the laboratory.
<b>Angle Measuring Devices</b>  Steel Squares	0 mm < L ≤ 200 mm	Steepness / Flatness	$(13 + 5 \cdot L) \mu\text{m}$	Optical Measurement Method  Procedure according to VDI/VDE/DGQ 2618 Part 7.1 Documents <b>L: Length</b>  Calibration is done in the laboratory.
<b>Angle Measuring Devices</b>  Steel Squares	0 mm < L ≤ 500 mm	Steepness	$(23 + 4 \cdot L) \mu\text{m}$	Optical Measurement Method  Procedure according to VDI/VDE/DGQ 2618 Part 7.1 Documents <b>L: Length</b>  Calibration is done in the laboratory.
<b>Angle Measuring Devices</b>  Steel Squares	0 mm < L ≤ 500 mm	Flatness	$(12 + 10 \cdot L) \mu\text{m}$	Optical Measurement Method  Procedure according to VDI/VDE/DGQ 2618 Part 7.1 Documents <b>L: Length</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Thread Gauge	0,1 mm < L ≤ 7 mm	Pitch	14,1 µm	Optical Measurement Method <b>L: Measured Step Length [m]</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Thread Gauge	0,1 mm ≤ L ≤ 7 mm	Angle (Angle Scale)	5,4'	Optical Measurement Method <b>L: Measured Step Length [m]</b>  Calibration is done in the laboratory.
<b>Handheld Basic Measuring Devices</b>  Thread Gauge	L ≤ 7 mm	Angle (Point Measurement)	14'	Optical Measurement Method <b>L: Measured Step Length [m]</b>  Calibration is done in the laboratory.




Calibration  
TS EN ISO/IEC 17025  
AB-0092-K

## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>Length Measuring Devices</b>  Crimping Tool	Head size: 0,1 mm ≤ L ≤ 26 mm	Measurement with micrometer	4 µm	Calibration procedure prepared in accordance with manufacturer standards, using the MIL-DTL-22520G Document.
<b>Length Measuring Devices</b>  Crimping Tool	Head size: 0,1 mm ≤ L ≤ 26 mm	Measurement with Go- No Go Gauge	10 µm	Calibration procedure prepared in accordance with manufacturer standards, using the MIL-DTL-22520G Document.
<b>Length Measuring Devices</b>  Crimping Tool	Head size: 0,1 mm ≤ L ≤ 26 mm	Measurement with Profile Projection	14 µm	Calibration procedure prepared in accordance with manufacturer standards, using the MIL-DTL-22520G Document.

This document has been signed by Gülden Banu Müderrisoğlu with a secure electronic signature in accordance with the electronic signature law numbered 5070. Use the QR code to verify the e-signed document.


 <p>Calibration TS EN ISO/IEC 17025 AB-0092-K</p>	<p><b>TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ</b></p> <p>Accreditation Nr: AB-0092-K Revision Nr: 14 Date: 07.06.2024</p>
--	---

Calibration and Measurement Capability (CMC)

Electricity-High Frequency Quantities (HF)

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
<b>Radio Frequency (RF) Power</b> <b>Absolute RF Power</b> RF Power Source Reference Power Output of RF Power Meters Signal Source	0,001 mW ≤ P ≤ 100 mW (-30 dBm ≤ P ≤ + 20 dBm)	100 kHz ≤ f < 4,2 GHz	% 6,64 · P	<b>P:</b> Power Using 8482A Power Sensor and 4418A Power Meter In the laboratory • calibration is done.

This document has been signed by Gülden Banu Müderrisoğlu with a secure electronic signature in accordance with the electronic signature law numbered 5070. Use the QR code to verify the e-signed document.

 <p>Calibration TS EN ISO/IEC 17025 AB-0092-K</p>	<p><b>TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ</b></p> <p>Accreditation Nr: AB-0092-K Revision Nr: 14 Date: 07.06.2024</p>
--	---

**Calibration and Measurement Capability (CMC)**

**Pressure**

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
<b>Relative Pressure</b>  Analog Manometer Digital Manometer Pressure Transducer	$3 \text{ kPa} \leq p \leq 3,5 \text{ MPa}$	Pneumatic (with DWT)	$1,6 \cdot 10^{-4} p + 72 \text{ Pa}$	Calibration procedure prepared in accordance with EURAMET/CG-17 Guidance Document  $p$ : Measured value (Pa)
<b>Relative Pressure</b>  Analog Manometer Digital Manometer Pressure Transducer	$0,1 \text{ MPa} \leq p \leq 3,5 \text{ MPa}$	Hydraulic (with DWT)	$1,7 \cdot 10^{-4} p + 60 \text{ Pa}$	Calibration procedure prepared in accordance with EURAMET/CG-17 Guidance Document  $p$ : Measured value (Pa)
<b>Relative Pressure</b>  Analog Manometer Digital Manometer Pressure Transducer	$3,5 \text{ MPa} \leq p \leq 70 \text{ MPa}$	Hydraulic (with DWT)	$1,8 \cdot 10^{-4} \cdot p + 0,47 \text{ kPa}$	Calibration procedure prepared in accordance with EURAMET/CG-17 Guidance Document  $p$ : Measured value (Pa)
<b>Relative Pressure</b>  Analog Manometer Digital Manometer Pressure Transducer	$-90 \text{ kPa} \leq p \leq -10 \text{ kPa}$	Pneumatic (with DWT)	$6 \text{ Pa} + 1,4 \cdot 10^{-4} \cdot p$	$p$ : Relative Pressure, (Pa)  Calibration procedure prepared in accordance with the EURAMA/cg-17 document.  ## Adjustments should be made by leaving the location(s) suitable for the place where the calibration activity is performed and deleting the other locations. Consider the R20-26 guide for scope entries.## • In customer place • In the laboratory • Temporary or mobile facilities  calibration is made.
<b>Absolute Pressure</b>  Analog Manometer Digital Manometer Pressure Transducer	$10 \text{ kPa} \leq p \leq 350 \text{ kPa}$	Pneumatic (with RPM4)	$4,3 \cdot 10^{-5} \cdot p + 0,13 \text{ kPa}$	Calibration procedure prepared in accordance with EURAMET/CG-17 Guidance Document  • $p$ : Measured value (Pa)
<b>Absolute Pressure</b>  Air Data Test Set (ADTS)	$2,5 \text{ kPa} \leq p \leq 350 \text{ kPa}$	Pneumatic (with RPM4)	$7 \cdot 10^{-5} \cdot p + 20 \text{ Pa}$	Calibration procedure prepared in accordance with EURAMET/CG-17 Guidance Document  • $p$ : Measured value (Pa)




## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>Absolute Pressure</b>  Analog Manometer Digital Manometer Pressure Transducer	$350 \text{ kPa} \leq p \leq 3,5 \text{ MPa}$	Pneumatic	$3,6 \cdot 10^{-4} \cdot p + 0,2 \text{ kPa}$	Calibration procedure prepared in accordance with EURAMET/CG-17 Guidance Document  • p: Measured value (Pa)
<b>Absolute Pressure</b>  Analog Manometer Digital Manometer Pressure Transducer	$3,5 \text{ MPa} \leq p \leq 70 \text{ MPa}$	Hydraulic	$3,7 \cdot 10^{-4} \cdot p + 0,1 \text{ kPa}$	Calibration procedure prepared in accordance with EURAMET/CG-17 Guidance Document  p: Measured value (Pa)
<b>Absolute Pressure</b>  Analog Barometer Digital Barometer	$750 \text{ hPa} \leq p \leq 1100 \text{ hPa}$	Barometric Cabin (with RPM4)	1,6 hPa	Calibration procedure prepared in accordance with EURAMET/CG-17 Guidance Document  • p: Measured value (Pa)
<b>Relative Pressure</b>  Difference Pressure Meter	$50 \text{ Pa} \leq p \leq 5000 \text{ Pa}$	with Difference Pressure Calibrator	$9,08 \cdot 10^{-4} \cdot p + 0,58 \text{ Pa}$	Calibration procedure prepared in accordance with EURAMET/CG-17 Guidance Document  p: Measured value (Pa)
<b>Relative Pressure</b>  Difference Pressure Meter	$3 \text{ kPa} \leq p \leq 7 \text{ MPa}$	with DWT	$1,8 \cdot 10^{-4} \cdot p + 0,47 \text{ kPa}$	Calibration procedure prepared in accordance with EURAMET/CG-17 Guidance Document  p: Measured value (Pa)

This document has been signed by Gülден Banu Müderrisoğlu with a secure electronic signature in accordance with the electronic signature law numbered 5070. Use the QR code to verify the e-signed document.


 <p>Calibration TS EN ISO/IEC 17025 AB-0092-K</p>	<p><b>TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ</b></p> <p>Accreditation Nr: AB-0092-K Revision Nr: 14 Date: 07.06.2024</p>
--	---

**Calibration and Measurement Capability (CMC)**

**Force**

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
<p><b>Force Measurement Devices</b></p> <p>Load Cell Force Converter Dynamometer Crane Scale</p>	0,45 kN ≤ F ≤ 200 kN	Tension and Compression with 00 Class Loadcell	0,08 %	<p>F: Applied force (N)</p> <p>DAkKS-DKD-R 3-3</p> <p>Procedure according to EN ISO 376 standards. A hydraulic force standard machine with a reference force transducer is used.</p> <ul style="list-style-type: none"> <li>Calibration is done in the laboratory.</li> </ul>
<i>Seçiniz</i>	1 N < F < 500 N ## A new scope entry line shall be added for each measurement range and not to enter multiple measurement range in the same cell. ##	Tensile/Compression with Dead Weight ##A new scope entry line shall be added for each measurement requirement and not to enter multiple measurement conditions in the same cell##	0,16 % ##A new scope entry line shall be added for each measurement uncertainty and not to be entered in multiple measurement uncertainty in the same cell.##	<p>F : applied force (N)</p> <p>Prepared calibration procedure in accordance with DKD R 3-3 guidance document.</p> <p>##Leave the location where calibration services provided and delete the others, if appropriate##</p> <ul style="list-style-type: none"> <li>Customer premises</li> <li>Laboratory</li> <li>Mobile or temporary premises</li> </ul>
<i>Seçiniz</i>	1 N < F < 500 N ## A new scope entry line shall be added for each measurement range and not to enter multiple measurement range in the same cell. ##	Tensile/Compression with Dead Weight ##A new scope entry line shall be added for each measurement requirement and not to enter multiple measurement conditions in the same cell##	0,16 % ##A new scope entry line shall be added for each measurement uncertainty and not to be entered in multiple measurement uncertainty in the same cell.##	<p>F : applied force (N)</p> <p>Prepared calibration procedure in accordance with DKD R 3-3 guidance document.</p> <p>##Leave the location where calibration services provided and delete the others, if appropriate##</p> <ul style="list-style-type: none"> <li>Customer premises</li> <li>Laboratory</li> <li>Mobile or temporary premises</li> </ul>
<p><b>Force Measurement Devices</b></p> <p>Hand Scale</p>	0,5 N ≤ F ≤ 500 N	Tensile/Compression with Dead Weight	0,1 %	<p>F: Applied force (N)</p> <p>Calibration procedure prepared in accordance with DKD R 3-3 Guidance Document</p> <ul style="list-style-type: none"> <li>Calibration is done in the laboratory.</li> </ul>

## Accreditation Scope

 <p>Calibration TS EN ISO/IEC 17025 AB-0092-K</p>	<b>TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ</b>  Accreditation Nr: AB-0092-K Revision Nr: 14 Date: 07.06.2024			
Seçiniz	1 N < F < 500 N ## A new scope entry line shall be added for each measurement range and not to enter multiple measurement range in the same cell. ##	Tensile/Compression with Dead Weight  ##A new scope entry line shall be added for each measurement requirement and not to enter multiple measurement conditions in the same cell##	0,16 % ##A new scope entry line shall be added for each measurement uncertainty and not to be entered in multiple measurement uncertainty in the same cell.##	F : applied force (N) Prepared calibration procedure in accordance with DKD R 3-3 guidance document. ##Leave the location where calibration services provided and delete the others, if appropriate## <ul style="list-style-type: none"><li>• Customer premises</li><li>• Laboratory</li><li>• Mobile or temporary premises</li></ul>

This document has been signed by Gülden Banu Müderrisoğlu with a secure electronic signature in accordance with the electronic signature law numbered 5070. Use the QR code to verify the e-signed document.





**TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ**

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

**Calibration and Measurement Capability (CMC)**

**Electricity - DC and Low Frequency Quantities (LF)**

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
<b>DC Voltage</b> DC Voltage Meters  Multimeter: DC Voltage DC Voltmeter	$0 \text{ mV} \leq U < 200 \text{ mV}$	-	$9,0 \cdot 10^{-6} \cdot U + 0,5 \mu\text{V}$	<b>U:</b> Measured voltage, V  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Voltage</b> DC Voltage Meters  Multimeter: DC Voltage DC Voltmeter	$200 \text{ mV} \leq U < 2 \text{ V}$	-	$6,0 \cdot 10^{-6} \cdot U + 1,0 \mu\text{V}$	<b>U:</b> Measured voltage, V  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Voltage</b> DC Voltage Meters  Multimeter: DC Voltage DC Voltmeter	$2 \text{ V} \leq U \leq 11 \text{ V}$	-	$4,0 \cdot 10^{-6} \cdot U + 5,0 \mu\text{V}$	<b>U:</b> Measured voltage, V  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Voltage</b> DC Voltage Meters  Multimeter: DC Voltage DC Voltmeter	$11 \text{ V} < U \leq 20 \text{ V}$	-	$4,0 \cdot 10^{-6} \cdot U + 0,6 \mu\text{V}$	<b>U:</b> Measured voltage, V  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Voltage</b> DC Voltage Meters  Multimeter: DC Voltage DC Voltmeter	$20 \text{ V} < U \leq 200 \text{ V}$	-	$7,0 \cdot 10^{-6} \cdot U + 40 \mu\text{V}$	<b>U:</b> Measured voltage, V  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>DC Voltage</b> DC Voltage Meters  Multimeter: DC Voltage DC Voltmeter	$200 \text{ V} < U \leq 1000 \text{ V}$	-	$9,0 \cdot 10^{-6} \cdot U + 0,6 \text{ mV}$	<b>U:</b> Measured voltage, V  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Voltage</b> DC Voltage Sources  DC Voltage Source Calibrator: DC Voltage	$0 \text{ mV} \leq U < 199,99 \text{ mV}$	-	$6,9 \cdot 10^{-6} \cdot U + 0,10 \mu\text{V}$	<b>U:</b> Measured voltage, V  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Voltage</b> DC Voltage Sources  DC Voltage Source Calibrator: DC Voltage	$199,99 \text{ mV} \leq U \leq 1,9999 \text{ V}$	-	$3,7 \cdot 10^{-6} \cdot U + 0,39 \mu\text{V}$	<b>U:</b> Measured voltage, V  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Voltage</b> DC Voltage Sources  DC Voltage Source Calibrator: DC Voltage	$1,9999 \text{ V} < U \leq 19,999 \text{ V}$	-	$4,0 \cdot 10^{-6} \cdot U + 0,35 \mu\text{V}$	<b>U:</b> Measured voltage, V  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Voltage</b> DC Voltage Sources  DC Voltage Source Calibrator: DC Voltage	$19,999 \text{ V} < U \leq 199,99 \text{ V}$	-	$6,2 \cdot 10^{-6} \cdot U + 45 \mu\text{V}$	<b>U:</b> Measured voltage, V  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Voltage</b> DC Voltage Sources  DC Voltage Source Calibrator: DC Voltage	$199,99 \text{ V} < U \leq 1000 \text{ V}$	-	$6,5 \cdot 10^{-6} \cdot U + 0,1 \text{ mV}$	<b>U:</b> Measured voltage, V  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



Calibration  
TS EN ISO/IEC 17025  
AB-0092-K

## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

DC Current <b>DC Current Meters</b>  Multimeter: DC Current Ampermeter	$20 \mu\text{A} \leq I \leq 220 \mu\text{A}$	-	$51 \cdot 10^{-6} \cdot I + 7,0 \text{ nA}$	<i>I</i> : Measured current, A  Direct Comparison Method with FLUKE 5720A Calibrator  • In customer place • In the laboratory  calibration is made.
DC Current <b>DC Current Meters</b>  Multimeter: DC Current Ampermeter	$220 \mu\text{A} < I \leq 2,2 \text{ mA}$	-	$42 \cdot 10^{-6} \cdot I + 8 \text{ nA}$	<i>I</i> : Measured current, A  Direct Comparison Method with FLUKE 5720A Calibrator  • In customer place • In the laboratory  calibration is made.
DC Current <b>DC Current Meters</b>  Multimeter: DC Current Ampermeter	$2,2 \text{ mA} < I \leq 22 \text{ mA}$	-	$44 \cdot 10^{-6} \cdot I + 4 \text{ nA}$	<i>I</i> : Measured current, A  Direct Comparison Method with FLUKE 5720A Calibrator  • In customer place • In the laboratory  calibration is made.
DC Current <b>DC Current Meters</b>  Multimeter: DC Current Ampermeter	$22 \text{ mA} < I \leq 220 \text{ mA}$	-	$55 \cdot 10^{-6} \cdot I + 0,11 \mu\text{A}$	<i>I</i> : Measured current, A  Direct Comparison Method with FLUKE 5720A Calibrator  • In customer place • In the laboratory  calibration is made.
DC Current <b>DC Current Meters</b>  Multimeter: DC Current Ampermeter	$220 \text{ mA} < I \leq 2,2 \text{ A}$	-	$98 \cdot 10^{-6} \cdot I + 0,27 \mu\text{A}$	<i>I</i> : Measured current, A  Direct Comparison Method with FLUKE 5720A Calibrator  • In customer place • In the laboratory  calibration is made.
DC Current <b>DC Current Meters</b>  Multimeter: DC Current Ampermeter	$1,1 \text{ A} < I \leq 11 \text{ A}$	-	$0,76 \cdot 10^{-3} \cdot I + 3,4 \text{ mA}$	<i>I</i> : Measured current, A  Direct Comparison Method with FLUKE 5522A Calibrator  • In customer place • In the laboratory  calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

DC Current <b>DC Current Meters</b>  Multimeter: DC Current Ampermeter	$11 \text{ A} < I \leq 20 \text{ A}$	-	$1,0 \cdot 10^{-3} \cdot I + 0,75 \text{ mA}$	<i>I</i> : Measured current, A  Direct Comparison Method with FLUKE 5522A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
DC Current <b>DC Current Meters</b>  Multimeter: DC Current Pensampermeter Clampmeter (toroidal type)	$10 \text{ A} \leq I \leq 15 \text{ A}$	-	% 0,25	<i>I</i> : Measured current, A  Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
DC Current <b>DC Current Meters</b>  Multimeter: DC Current Pensampermeter Clampmeter (toroidal type)	$15 \text{ A} < I < 150 \text{ A}$	-	% 0,27	<i>I</i> : Measured current, A  Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
DC Current <b>DC Current Meters</b>  Multimeter: DC Current Pensampermeter Clampmeter (toroidal type)	$150 \text{ A} \leq I < 500 \text{ A}$	-	% 0,23	<i>I</i> : Measured current, A  Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
DC Current <b>DC Current Meters</b>  Multimeter: DC Current Pensampermeter Clampmeter (toroidal type)	$500 \text{ A} \leq I \leq 1000 \text{ A}$	-	% 0,24	<i>I</i> : Measured current, A  Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
DC Current <b>DC Current Meters</b>  Multimeter: DC Current Pensampermeter Clampmeter (non-toroidal type)	$10 \text{ A} \leq I \leq 15 \text{ A}$	-	% 0,56	<i>I</i> : Measured current, A  Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<p>DC Current</p> <p><b>DC Current Meters</b></p> <p>Multimeter: DC Current Pensampermeter Clampmeter (non-toroidal type)</p>	15 A < I < 150 A	-	% 1,1	<p>I: Measured current, A</p> <p>Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p>calibration is made.</p>
<p>DC Current</p> <p><b>DC Current Meters</b></p> <p>Multimeter: DC Current Pensampermeter Clampmeter (non-toroidal type)</p>	150 A ≤ I < 500 A	-	% 0,65	<p>I: Measured current, A</p> <p>Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p>calibration is made.</p>
<p>DC Current</p> <p><b>DC Current Meters</b></p> <p>Multimeter: DC Current Pensampermeter Clampmeter (non-toroidal type)</p>	500 A ≤ I ≤ 1000 A	-	% 0,48	<p>I: Measured current, A</p> <p>Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p>calibration is made.</p>
<p><b>DC Current</b></p> <p>DC Current Sources</p> <p>DC Current Source Calibrator: DC Current</p>	20 μA ≤ I ≤ 200 μA	-	$16 \cdot 10^{-6} \cdot I + 0,4 \text{ nA}$	<p>I: Measured current, A</p> <p>Direct Comparison Method with Fluke 8508A Reference Multimeter</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p>calibration is made.</p>
<p><b>DC Current</b></p> <p>DC Current Sources</p> <p>DC Current Source Calibrator: DC Current</p>	200 μA < I ≤ 2 mA	-	$18 \cdot 10^{-6} \cdot I + 0,12 \text{ nA}$	<p>I: Measured current, A</p> <p>Direct Comparison Method with Fluke 8508A Reference Multimeter</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p>calibration is made.</p>
<p><b>DC Current</b></p> <p>DC Current Sources</p> <p>DC Current Source Calibrator: DC Current</p>	2 mA < I ≤ 20 mA	-	$17 \cdot 10^{-6} \cdot I + 1,7 \text{ nA}$	<p>I: Measured current, A</p> <p>Direct Comparison Method with Fluke 8508A Reference Multimeter</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p>calibration is made.</p>



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>DC Current</b>  DC Current Sources  DC Current Source Calibrator: DC Current	$20 \text{ mA} < I \leq 200 \text{ mA}$	-	$52 \cdot 10^{-6} \cdot I + 0,21 \mu\text{A}$	<i>I</i> : Measured current, A  Direct Comparison Method with Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Current</b>  DC Current Sources  DC Current Source Calibrator: DC Current	$200 \text{ mA} < I \leq 2 \text{ A}$	-	$0,24 \cdot 10^{-3} \cdot I + 4 \text{ mA}$	<i>I</i> : Measured current, A  Direct Comparison Method with Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Current</b>  DC Current Sources  DC Current Source Calibrator: DC Current	$2 \text{ A} < I \leq 20 \text{ A}$	-	$4,4 \cdot 10^{-4} \cdot I + 0,5 \text{ mA}$	<i>I</i> : Measured current, A  Direct Comparison Method with Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Current</b>  DC Current Sources  DC Current Source Calibrator: DC Current	$20 \text{ A} \leq I \leq 30 \text{ A}$	-	$3,6 \text{ mA/A}$	<i>I</i> : Measured current, A  Direct Comparison Method with Fluke 5320A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
DC Current  DC High Current Sources	$10 \text{ A} \leq I \leq 100 \text{ A}$	-	$1 \cdot 10^{-3} \cdot I + 10 \text{ mA}$	<i>I</i> : Measured current, A  Using Fluke 8508A and Shunt Resistor  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$2,2 \text{ mV} \leq U \leq 22 \text{ mV}$	$10 \text{ Hz} \leq f \leq 20 \text{ Hz}$	$0,26 \cdot 10^{-3} \cdot U + 4,0 \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



Calibration  
TS EN ISO/IEC 17025  
AB-0092-K

## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$2,2 \text{ mV} \leq U \leq 22 \text{ mV}$	$20 \text{ Hz} < f \leq 40 \text{ Hz}$	$0,11 \cdot 10^{-3} \cdot U + 4,0 \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$2,2 \text{ mV} \leq U \leq 22 \text{ mV}$	$40 \text{ Hz} < f \leq 20 \text{ kHz}$	$0,10 \cdot 10^{-3} \cdot U + 4,0 \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$2,2 \text{ mV} \leq U \leq 22 \text{ mV}$	$20 \text{ kHz} < f \leq 100 \text{ kHz}$	$0,51 \cdot 10^{-3} \cdot U + 5,0 \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$22 \text{ mV} < U \leq 220 \text{ mV}$	$10 \text{ Hz} \leq f \leq 20 \text{ Hz}$	$0,29 \cdot 10^{-3} \cdot U + 12 \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$22 \text{ mV} < U \leq 220 \text{ mV}$	$20 \text{ Hz} < f \leq 40 \text{ Hz}$	$0,11 \cdot 10^{-3} \cdot U + 6,8 \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$22 \text{ mV} < U \leq 220 \text{ mV}$	$40 \text{ Hz} < f \leq 20 \text{ kHz}$	$0,10 \cdot 10^{-3} \cdot U + 6,9 \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>AC Voltage</b> AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	22 mV < U ≤ 220 mV	20 kHz < f ≤ 50 kHz	$0,21 \cdot 10^{-3} \cdot U + 7,0 \mu\text{V}$	U: Measured voltage, V f: Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  • In customer place • In the laboratory  calibration is made.
<b>AC Voltage</b> AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	22 mV < U ≤ 220 mV	50 kHz < f ≤ 100 kHz	$0,47 \cdot 10^{-3} \cdot U + 17 \mu\text{V}$	U: Measured voltage, V f: Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  • In customer place • In the laboratory  calibration is made.
<b>AC Voltage</b> AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	22 mV < U ≤ 220 mV	100 kHz < f ≤ 300 kHz	$0,92 \cdot 10^{-3} \cdot U + 20 \mu\text{V}$	U: Measured voltage, V f: Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  • In customer place • In the laboratory  calibration is made.
<b>AC Voltage</b> AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	22 mV < U ≤ 220 mV	300 kHz < f ≤ 500 kHz	$1,5 \cdot 10^{-3} \cdot U + 25 \mu\text{V}$	U: Measured voltage, V f: Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  • In customer place • In the laboratory  calibration is made.
<b>AC Voltage</b> AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	22 mV < U ≤ 220 mV	500 kHz < f ≤ 1 MHz	$2,8 \cdot 10^{-3} \cdot U + 45 \mu\text{V}$	U: Measured voltage, V f: Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  • In customer place • In the laboratory  calibration is made.
<b>AC Voltage</b> AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	220 mV < U ≤ 2,2 V	10 Hz ≤ f ≤ 20 Hz	$0,25 \cdot 10^{-3} \cdot U + 40 \mu\text{V}$	U: Measured voltage, V f: Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  • In customer place • In the laboratory  calibration is made.





## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	220 mV < $U \leq 2,2$ V	20 Hz < $f \leq 40$ Hz	$0,1 \cdot 10^{-3} \cdot U + 15 \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	220 mV < $U \leq 2,2$ V	40 Hz < $f \leq 20$ kHz	$49 \cdot 10^{-6} \cdot U + 8 \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	220 mV < $U \leq 2,2$ V	20 kHz < $f \leq 50$ kHz	$77 \cdot 10^{-6} \cdot U + 10 \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	220 mV < $U \leq 2,2$ V	50 kHz < $f \leq 100$ kHz	$0,12 \cdot 10^{-3} \cdot U + 30 \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	220 mV < $U \leq 2,2$ V	100 kHz < $f \leq 300$ kHz	$0,39 \cdot 10^{-3} \cdot U + 80 \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	220 mV < $U \leq 2,2$ V	300 kHz < $f \leq 500$ kHz	$0,96 \cdot 10^{-3} \cdot U + 0,2 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$220 \text{ mV} < U \leq 2,2 \text{ V}$	$500 \text{ kHz} < f \leq 1 \text{ MHz}$	$1,7 \cdot 10^{-3} \cdot U + 0,3 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$2,2 \text{ V} < U \leq 22 \text{ V}$	$10 \text{ Hz} \leq f \leq 20 \text{ Hz}$	$0,25 \cdot 10^{-3} \cdot U + 0,4 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$2,2 \text{ V} < U \leq 22 \text{ V}$	$20 \text{ Hz} < f \leq 40 \text{ Hz}$	$0,1 \cdot 10^{-3} \cdot U + 0,15 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$2,2 \text{ V} < U \leq 22 \text{ V}$	$40 \text{ Hz} < f \leq 20 \text{ kHz}$	$51 \cdot 10^{-6} \cdot U + 47 \text{ } \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$2,2 \text{ V} < U \leq 22 \text{ V}$	$20 \text{ kHz} < f \leq 50 \text{ kHz}$	$79 \cdot 10^{-6} \cdot U + 98 \text{ } \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$2,2 \text{ V} < U \leq 22 \text{ V}$	$50 \text{ kHz} < f \leq 100 \text{ kHz}$	$0,11 \cdot 10^{-3} \cdot U + 0,2 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



Calibration  
TS EN ISO/IEC 17025  
AB-0092-K

## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$2,2 V < U \leq 22 V$	$100 \text{ kHz} < f \leq 300 \text{ kHz}$	$0,29 \cdot 10^{-3} \cdot U + 0,59 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$2,2 V < U \leq 22 V$	$300 \text{ kHz} < f \leq 500 \text{ kHz}$	$1,1 \cdot 10^{-3} \cdot U + 2 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$2,2 V < U \leq 22 V$	$500 \text{ kHz} < f \leq 1 \text{ MHz}$	$1,6 \cdot 10^{-3} \cdot U + 3,2 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$22 V < U \leq 220 V$	$10 \text{ Hz} \leq f \leq 20 \text{ Hz}$	$0,25 \cdot 10^{-3} \cdot U + 4 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$22 V < U \leq 220 V$	$20 \text{ Hz} < f \leq 40 \text{ Hz}$	$0,1 \cdot 10^{-3} \cdot U + 2 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$22 V < U \leq 220 V$	$40 \text{ Hz} < f \leq 20 \text{ kHz}$	$57 \cdot 10^{-6} \cdot U + 0,58 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$22 \text{ V} < U \leq 220 \text{ V}$	$20 \text{ kHz} < f \leq 50 \text{ kHz}$	$86 \cdot 10^{-6} \cdot U + 1 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$22 \text{ V} < U \leq 220 \text{ V}$	$50 \text{ kHz} < f \leq 100 \text{ kHz}$	$0,16 \cdot 10^{-3} \cdot U + 2,5 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$220 \text{ V} < U \leq 1000 \text{ V}$	$40 \text{ Hz} \leq f < 1 \text{ kHz}$	$0,11 \cdot 10^{-3} \cdot U + 3,5 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$220 \text{ V} < U \leq 1000 \text{ V}$	$1 \text{ kHz} < f < 20 \text{ kHz}$	$0,18 \cdot 10^{-3} \cdot U + 5,7 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A-5725A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Meters  Multimeter: AC Voltage AC Voltmeter	$220 \text{ V} < U \leq 1000 \text{ V}$	$20 \text{ kHz} < f \leq 30 \text{ kHz}$	$0,67 \cdot 10^{-3} \cdot U + 11 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A-5725A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$2 \text{ mV} \leq U \leq 200 \text{ mV}$	$10 \text{ Hz} \leq f \leq 40 \text{ Hz}$	$0,12 \cdot 10^{-3} \cdot U + 4 \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$2 \text{ mV} \leq U \leq 200 \text{ mV}$	$40 \text{ Hz} < f \leq 100 \text{ Hz}$	$0,12 \cdot 10^{-3} \cdot U + 4 \text{ } \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$2 \text{ mV} \leq U \leq 200 \text{ mV}$	$100 \text{ Hz} < f \leq 2 \text{ kHz}$	$0,12 \cdot 10^{-3} \cdot U + 2 \text{ } \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$2 \text{ mV} \leq U \leq 200 \text{ mV}$	$2 \text{ kHz} < f \leq 10 \text{ kHz}$	$0,12 \cdot 10^{-3} \cdot U + 4 \text{ } \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$2 \text{ mV} \leq U \leq 200 \text{ mV}$	$10 \text{ kHz} < f \leq 30 \text{ kHz}$	$0,31 \cdot 10^{-3} \cdot U + 8 \text{ } \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$2 \text{ mV} \leq U \leq 200 \text{ mV}$	$30 \text{ kHz} < f \leq 100 \text{ kHz}$	$0,70 \cdot 10^{-3} \cdot U + 20 \text{ } \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$200 \text{ mV} < U \leq 2 \text{ V}$	$10 \text{ Hz} \leq f \leq 40 \text{ Hz}$	$0,11 \cdot 10^{-3} \cdot U + 20 \text{ } \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	200 mV < $U \leq 2$ V	40 Hz < $f \leq 100$ Hz	$86 \cdot 10^{-6} \cdot U + 20 \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>• In customer place</li> <li>• In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	200 mV < $U \leq 2$ V	100 Hz < $f \leq 2$ kHz	$67 \cdot 10^{-6} \cdot U + 20 \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>• In customer place</li> <li>• In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	200 mV < $U \leq 2$ V	2 kHz < $f \leq 10$ kHz	$86 \cdot 10^{-6} \cdot U + 20 \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>• In customer place</li> <li>• In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	200 mV < $U \leq 2$ V	10 kHz < $f \leq 30$ kHz	$0,21 \cdot 10^{-3} \cdot U + 40 \mu\text{V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>• In customer place</li> <li>• In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	200 mV < $U \leq 2$ V	30 kHz < $f \leq 100$ kHz	$0,51 \cdot 10^{-3} \cdot U + 0,20 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>• In customer place</li> <li>• In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	200 mV < $U \leq 2$ V	100 kHz < $f \leq 300$ kHz	$3,0 \cdot 10^{-3} \cdot U + 2 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>• In customer place</li> <li>• In the laboratory</li> </ul> calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$200 \text{ mV} < U \leq 2 \text{ V}$	$300 \text{ kHz} < f \leq 1 \text{ MHz}$	$10 \cdot 10^{-3} \cdot U + 20 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$2 \text{ V} < U \leq 20 \text{ V}$	$10 \text{ Hz} \leq f \leq 40 \text{ Hz}$	$0,11 \cdot 10^{-3} \cdot U + 0,2 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$2 \text{ V} < U \leq 20 \text{ V}$	$40 \text{ Hz} < f \leq 100 \text{ Hz}$	$86 \cdot 10^{-6} \cdot U + 0,2 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$2 \text{ V} < U \leq 20 \text{ V}$	$100 \text{ Hz} < f \leq 2 \text{ kHz}$	$67 \cdot 10^{-6} \cdot U + 0,2 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$2 \text{ V} < U \leq 20 \text{ V}$	$2 \text{ kHz} < f \leq 10 \text{ kHz}$	$86 \cdot 10^{-6} \cdot U + 0,2 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$2 \text{ V} < U \leq 20 \text{ V}$	$10 \text{ kHz} < f \leq 30 \text{ kHz}$	$0,2 \cdot 10^{-3} \cdot U + 0,4 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$2 V < U \leq 20 V$	$30 \text{ kHz} < f \leq 100 \text{ kHz}$	$0,5 \cdot 10^{-3} \cdot U + 2 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$2 V < U \leq 20 V$	$100 \text{ kHz} < f \leq 300 \text{ kHz}$	$3,0 \cdot 10^{-3} \cdot U + 20 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$2 V < U \leq 20 V$	$300 \text{ kHz} < f \leq 1 \text{ MHz}$	$10 \cdot 10^{-3} \cdot U + 0,2 V$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$20 V < U \leq 200 V$	$10 \text{ Hz} \leq f \leq 40 \text{ Hz}$	$0,11 \cdot 10^{-3} \cdot U + 2 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$20 V < U \leq 200 V$	$40 \text{ Hz} < f \leq 100 \text{ Hz}$	$92 \cdot 10^{-6} \cdot U + 1,9 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$20 V < U \leq 200 V$	$100 \text{ Hz} < f \leq 2 \text{ kHz}$	$75 \cdot 10^{-6} \cdot U + 1,9 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.





## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$20 \text{ V} < U \leq 200 \text{ V}$	$2 \text{ kHz} < f \leq 10 \text{ kHz}$	$92 \cdot 10^{-6} \cdot U + 1,9 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$20 \text{ V} < U \leq 200 \text{ V}$	$10 \text{ kHz} < f \leq 30 \text{ kHz}$	$0,20 \cdot 10^{-3} \cdot U + 4 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$20 \text{ V} < U \leq 200 \text{ V}$	$30 \text{ kHz} < f \leq 100 \text{ kHz}$	$0,50 \cdot 10^{-3} \cdot U + 20 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$200 \text{ V} < U \leq 1000 \text{ V}$	$40 \text{ Hz} < f \leq 10 \text{ kHz}$	$97 \cdot 10^{-6} \cdot U + 19 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$200 \text{ V} < U \leq 1000 \text{ V}$	$10 \text{ kHz} < f \leq 30 \text{ kHz}$	$0,21 \cdot 10^{-3} \cdot U + 40 \text{ mV}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Voltage</b>  AC Voltage Sources  AC Voltage Source Calibrator: AC Voltage	$200 \text{ V} < U \leq 1000 \text{ V}$	$30 \text{ kHz} < f \leq 100 \text{ kHz}$	$0,51 \cdot 10^{-3} \cdot U + 0,20 \text{ V}$	<i>U</i> : Measured voltage, V <i>f</i> : Frequency, Hz  Direct Comparison Method to Fluke 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



Calibration  
TS EN ISO/IEC 17025  
AB-0092-K

## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$100 \mu\text{A} \leq I \leq 220 \mu\text{A}$	$10 \text{ Hz} \leq f \leq 20 \text{ Hz}$	0,82 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$100 \mu\text{A} \leq I \leq 220 \mu\text{A}$	$20 \text{ Hz} < f \leq 40 \text{ Hz}$	0,72 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$100 \mu\text{A} \leq I \leq 220 \mu\text{A}$	$40 \text{ Hz} < f \leq 1 \text{ kHz}$	0,31 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$100 \mu\text{A} \leq I \leq 220 \mu\text{A}$	$1 \text{ kHz} < f \leq 5 \text{ kHz}$	0,56 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$100 \mu\text{A} \leq I \leq 220 \mu\text{A}$	$5 \text{ kHz} < f \leq 10 \text{ kHz}$	2,2 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$220 \mu\text{A} < I \leq 2,2 \text{ mA}$	$10 \text{ Hz} \leq f \leq 20 \text{ Hz}$	0,42 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$220 \mu\text{A} < I \leq 2,2 \text{ mA}$	$20 \text{ Hz} < f \leq 40 \text{ Hz}$	0,30 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$220 \mu\text{A} < I \leq 2,2 \text{ mA}$	$40 \text{ Hz} < f \leq 1 \text{ kHz}$	0,22 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$220 \mu\text{A} < I \leq 2,2 \text{ mA}$	$1 \text{ kHz} < f \leq 5 \text{ kHz}$	0,46 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$220 \mu\text{A} < I \leq 2,2 \text{ mA}$	$5 \text{ kHz} < f \leq 10 \text{ kHz}$	1,8 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$2,2 \text{ mA} < I \leq 22 \text{ mA}$	$10 \text{ Hz} \leq f \leq 20 \text{ Hz}$	0,32 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$2,2 \text{ mA} < I \leq 22 \text{ mA}$	$20 \text{ Hz} < f \leq 40 \text{ Hz}$	0,22 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$2,2 \text{ mA} < I \leq 22 \text{ mA}$	$40 \text{ Hz} < f \leq 1 \text{ kHz}$	0,16 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$2,2 \text{ mA} < I \leq 22 \text{ mA}$	$1 \text{ kHz} < f \leq 5 \text{ kHz}$	0,30 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$2,2 \text{ mA} < I \leq 22 \text{ mA}$	$5 \text{ kHz} < f \leq 10 \text{ kHz}$	1,7 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$22 \text{ mA} < I \leq 220 \text{ mA}$	10 Hz - 20 Hz	0,53 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$22 \text{ mA} < I \leq 220 \text{ mA}$	$20 \text{ Hz} < f \leq 40 \text{ Hz}$	0,19 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$22 \text{ mA} < I \leq 220 \text{ mA}$	$40 \text{ Hz} < f \leq 1 \text{ kHz}$	0,23 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$22 \text{ mA} < I \leq 220 \text{ mA}$	$1 \text{ kHz} < f \leq 5 \text{ kHz}$	0,36 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$22 \text{ mA} < I \leq 220 \text{ mA}$	$5 \text{ kHz} < f \leq 10 \text{ kHz}$	1,6 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$220 \text{ mA} < I \leq 2,2 \text{ A}$	$20 \text{ Hz} \leq f \leq 1 \text{ kHz}$	0,34 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$220 \text{ mA} < I \leq 2,2 \text{ A}$	$1 \text{ kHz} < f \leq 5 \text{ kHz}$	0,55 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$220 \text{ mA} < I \leq 2,2 \text{ A}$	$5 \text{ kHz} < f \leq 10 \text{ kHz}$	8,1 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$2,2 \text{ A} < I \leq 11 \text{ A}$	$40 \text{ Hz} \leq f \leq 1 \text{ kHz}$	2,3 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A-5725A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$2,2 \text{ A} < I \leq 11 \text{ A}$	$1 \text{ kHz} < f \leq 5 \text{ kHz}$	2,5 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A-5725A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$2,2 \text{ A} < I \leq 11 \text{ A}$	$5 \text{ kHz} < f \leq 10 \text{ kHz}$	4,5 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5720A-5725A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$11 \text{ A} \leq I \leq 20 \text{ A}$	$45 \text{ Hz} \leq f \leq 1 \text{ kHz}$	6,3 mA/A	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5522A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Multimeter: AC Current AC Amperemeter	$11 \text{ A} \leq I \leq 20 \text{ A}$	$1 \text{ kHz} \leq f \leq 5 \text{ kHz}$	% 3,1	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with FLUKE 5522A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Pensampermeter Clampmeter (toroidal type)	$10 \text{ A} \leq I \leq 15 \text{ A}$	$45 \text{ Hz} \leq f \leq 65 \text{ Hz}$	% 0,28	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Pensampermeter Clampmeter(toroidal type)	$10 \text{ A} \leq I \leq 15 \text{ A}$	$65 \text{ Hz} < f \leq 440 \text{ Hz}$	% 0,65	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



Calibration  
TS EN ISO/IEC 17025  
AB-0092-K

## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>AC Current</b>  AC Current Meter  Pensampermeter Clampmeter(toroidal type)	15 A < I < 150 A	45 Hz ≤ f ≤ 65 Hz	% 0,35	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Pensampermeter Clampmeter(toroidal type)	15 A < I < 150 A	65 Hz < f ≤ 440 Hz	% 0,76	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Pensampermeter Clampmeter(toroidal type)	150 A ≤ I < 500 A	45 Hz ≤ f ≤ 65 Hz	% 0,28	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Pensampermeter Clampmeter(toroidal type)	150 A ≤ I < 500 A	65 Hz < f ≤ 440 Hz	% 0,67	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Pensampermeter Clampmeter(toroidal type)	500 A ≤ I ≤ 1000 A	45 Hz ≤ f ≤ 65 Hz	% 0,27	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>AC Current</b>  AC Current Meter  Pensampermeter Clampmeter (toroidal type)	$500 \text{ A} \leq I \leq 1000 \text{ A}$	$65 \text{ Hz} < f \leq 440 \text{ Hz}$	% 0,64	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Pensampermeter Clampmeter(non-toroidal type)	$10 \text{ A} \leq I \leq 15 \text{ A}$	$45 \text{ Hz} \leq f \leq 65 \text{ Hz}$	% 0,68	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Pensampermeter Clampmeter(non-toroidal type)	$10 \text{ A} \leq I \leq 15 \text{ A}$	$65 \text{ Hz} < f \leq 440 \text{ Hz}$	% 1,0	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Pensampermeter Clampmeter(non-toroidal type)	$15 \text{ A} < I < 150 \text{ A}$	$45 \text{ Hz} \leq f \leq 65 \text{ Hz}$	% 1,8	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Pensampermeter Clampmeter(non-toroidal type)	$15 \text{ A} < I < 150 \text{ A}$	$65 \text{ Hz} < f \leq 440 \text{ Hz}$	% 2,1	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.





## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>AC Current</b>  AC Current Meter  Pensampermeter Clampmeter(non-toroidal type)	$150 \text{ A} \leq I < 500 \text{ A}$	$45 \text{ Hz} \leq f \leq 65 \text{ Hz}$	% 0,90	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Pensampermeter Clampmeter(non-toroidal type)	$150 \text{ A} \leq I < 500 \text{ A}$	$65 \text{ Hz} < f \leq 440 \text{ Hz}$	% 1,3	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Pensampermeter Clampmeter(non-toroidal type)	$500 \text{ A} \leq I \leq 1000 \text{ A}$	$45 \text{ Hz} \leq f \leq 65 \text{ Hz}$	% 0,59	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Meter  Pensampermeter Clampmeter(non-toroidal type)	$500 \text{ A} \leq I \leq 1000 \text{ A}$	$65 \text{ Hz} < f \leq 440 \text{ Hz}$	% 0,92	<i>I</i> : Measured current, A <i>f</i> : Frequency, Hz  Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Sources  AC Current Source Calibrator: AC Current	$100 \mu\text{A} \leq I \leq 200 \mu\text{A}$	$10 \text{ Hz} \leq f \leq 10 \text{ kHz}$	$0,29 \cdot 10^{-3} \cdot I + 19 \text{ nA}$	<i>I</i> : Current, A <i>f</i> : Frequency, Hz  Direct Comparison method to Fluke 8508A Reference Multimeter <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Sources  AC Current Source Calibrator: AC Current	$100 \mu\text{A} \leq I \leq 200 \mu\text{A}$	$10 \text{ kHz} < f \leq 30 \text{ kHz}$	$0,72 \cdot 10^{-3} \cdot I + 18 \text{ nA}$	<i>I</i> : Current, A <i>f</i> : Frequency, Hz  Direct Comparison method to Fluke 8508A Reference Multimeter <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>AC Current</b>  AC Current Sources  AC Current Source Calibrator: AC Current	$200 \mu\text{A} < I \leq 2 \text{ mA}$	$10 \text{ Hz} \leq f \leq 10 \text{ kHz}$	$0,26 \cdot 10^{-3} \cdot I + 0,2 \mu\text{A}$	<i>I</i> : Current, A <i>f</i> : Frequency, Hz  Direct Comparison method to Fluke 8508A Reference Multimeter <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Sources  AC Current Source Calibrator: AC Current	$200 \mu\text{A} < I \leq 2 \text{ mA}$	$10 \text{ kHz} < f \leq 30 \text{ kHz}$	$0,61 \cdot 10^{-3} \cdot I + 0,2 \mu\text{A}$	<i>I</i> : Current, A <i>f</i> : Frequency, Hz  Direct Comparison method to Fluke 8508A Reference Multimeter <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Sources  AC Current Source Calibrator: AC Current	$2 \text{ mA} \leq I < 20 \text{ mA}$	$10 \text{ Hz} \leq f \leq 10 \text{ kHz}$	$0,26 \cdot 10^{-3} \cdot I + 2 \mu\text{A}$	<i>I</i> : Current, A <i>f</i> : Frequency, Hz  Direct Comparison method to Fluke 8508A Reference Multimeter <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Sources  AC Current Source Calibrator: AC Current	$2 \text{ mA} < I \leq 20 \text{ mA}$	$10 \text{ kHz} < f \leq 30 \text{ kHz}$	$0,61 \cdot 10^{-3} \cdot I + 2 \mu\text{A}$	<i>I</i> : Current, A <i>f</i> : Frequency, Hz  Direct Comparison method to Fluke 8508A Reference Multimeter <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Sources  AC Current Source Calibrator: AC Current	$20 \text{ mA} < I \leq 200 \text{ mA}$	$10 \text{ Hz} \leq f \leq 10 \text{ kHz}$	$0,26 \cdot 10^{-3} \cdot I + 20 \mu\text{A}$	<i>I</i> : Current, A <i>f</i> : Frequency, Hz  <i>Direct Comparison method to Fluke 8508A</i> Reference Multimeter <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Sources  AC Current Source Calibrator: AC Current	$20 \text{ mA} < I \leq 200 \text{ mA}$	$10 \text{ kHz} < f \leq 30 \text{ kHz}$	$0,61 \cdot 10^{-3} \cdot I + 20 \mu\text{A}$	<i>I</i> : Current, A <i>f</i> : Frequency, Hz  Direct Comparison method to Fluke 8508A Reference Multimeter <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Sources  AC Current Source Calibrator: AC Current	$200 \text{ mA} < I \leq 2 \text{ A}$	$10 \text{ Hz} \leq f \leq 2 \text{ kHz}$	$0,60 \cdot 10^{-3} \cdot I + 0,2 \text{ mA}$	<i>I</i> : Current, A <i>f</i> : Frequency, Hz  Direct Comparison method to Fluke 8508A Reference Multimeter <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>AC Current</b>  AC Current Sources  AC Current Source Calibrator: AC Current	200 mA < $I \leq 2$ A	2 kHz < $f \leq 10$ kHz	$0,73 \cdot 10^{-3} \cdot I + 0,2$ mA	<i>I</i> : Current, A <i>f</i> : Frequency, Hz  Direct Comparison method to Fluke 8508A Reference Multimeter <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Sources  AC Current Source Calibrator: AC Current	2 A < $I \leq 20$ A	10 Hz $\leq f \leq 2$ kHz	$0,81 \cdot 10^{-3} \cdot I + 2$ mA	<i>I</i> : Current, A <i>f</i> : Frequency, Hz  Direct Comparison method to Fluke 8508A Reference Multimeter <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC Current</b>  AC Current Sources  AC Current Source Calibrator: AC Current	2 A < $I \leq 20$ A	2 kHz < $f \leq 10$ kHz	$2,5 \cdot 10^{-3} \cdot I + 2$ mA	<i>I</i> : Current, A <i>f</i> : Frequency, Hz  Direct Comparison method to Fluke 8508A Reference Multimeter <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Resistor</b>  DC Resistance Meters  Multimeter Resistor Microohmmeter Ohmmeter milliohmmeter	1 m $\Omega$	( 23 $\pm$ 2) C	0,41 m $\Omega/\Omega$	<i>R</i> : Measured Resistance, $\Omega$  Direct Comparison Method with 4-pin Reference Resistors <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Resistor</b>  DC Resistance Meters  Multimeter Resistor Microohmmeter Ohmmeter milliohmmeter	10 m $\Omega$	( 23 $\pm$ 2) C	0,11 m $\Omega/\Omega$	<i>R</i> : Measured Resistance, $\Omega$  Direct Comparison Method with 4-pin Reference Resistors <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Resistor</b>  DC Resistance Meters  Multimeter Resistor Microohmmeter Ohmmeter milliohmmeter	100 m $\Omega$	( 23 $\pm$ 2) C	44 $\mu\Omega/\Omega$	<i>R</i> : Measured Resistance, $\Omega$  Direct Comparison Method with 4-pin Reference Resistors <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Microohmmeter Ohmmeter milliohmmeter	1 Ω	( 23 ± 2) C	32 μΩ/Ω	<b>R:</b> Measured Resistance,Ω  Direct Comparison Method with 4-pin Reference Resistors  • In customer place • In the laboratory  calibration is made.
<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Microohmmeter Ohmmeter milliohmmeter	10 Ω	( 23 ± 2) C	37 μΩ/Ω	<b>R:</b> Measured Resistance,Ω  Direct Comparison Method with 4-pin Reference Resistors  • In customer place • In the laboratory  calibration is made.
<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Microohmmeter Ohmmeter milliohmmeter	100 Ω	( 23 ± 2) C	14 μΩ/Ω	<b>R:</b> Measured Resistance,Ω  Direct Comparison Method with 4-pin Reference Resistors  • In customer place • In the laboratory  calibration is made.
<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Microohmmeter Ohmmeter milliohmmeter	1 kΩ	( 23 ± 2) C	13 μΩ/Ω	<b>R:</b> Measured Resistance,Ω  Direct Comparison Method with 4-pin Reference Resistors  • In customer place • In the laboratory  calibration is made.
<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Microohmmeter Ohmmeter milliohmmeter	10 kΩ	( 23 ± 2) C	14 μΩ/Ω	<b>R:</b> Measured Resistance,Ω  Direct Comparison Method with 4-pin Reference Resistors  • In customer place • In the laboratory  calibration is made.
<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Microohmmeter Ohmmeter Milliohmmeter	100 kΩ	( 23 ± 2) C	11 μΩ/Ω	<b>R:</b> Measured Resistance,Ω  Direct Comparison Method with 4-pin Reference Resistors  • In customer place • In the laboratory  calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>DC Resistor</b>  DC Resistance Meters  Multimeter Resistor Microohmmeter Ohmmeter Milliohmmeter	1 M $\Omega$	( 23 $\pm$ 2) C	17 $\mu\Omega/\Omega$	<b>R: Measured Resistance,<math>\Omega</math></b>  Direct Comparison Method with 4-pin Reference Resistors  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Resistor</b>  DC Resistance Meters  Multimeter Resistor Microohmmeter Ohmmeter Milliohmmeter	10 M $\Omega$	( 23 $\pm$ 2) C	34 $\mu\Omega/\Omega$	<b>R: Measured Resistance,<math>\Omega</math></b>  Direct Comparison Method with 4-pin Reference Resistors  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Resistor</b>  DC Resistance Meters  Multimeter Resistor Microohmmeter Ohmmeter Milliohmmeter	1 G $\Omega$	( 23 $\pm$ 2) C	0,61 m $\Omega/\Omega$	<b>R: Measured Resistance,<math>\Omega</math></b>  Direct Comparison Method with 4-pin Reference Resistors  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Resistor</b>  DC Resistance Meters  Multimeter Resistor Ohmmeter	1 $\Omega$	4 Wire (2-Wire for 100 M $\Omega$ )	96 $\mu\Omega/\Omega$	<b>R: Measured Resistance,<math>\Omega</math></b>  Direct Comparison Method with FLUKE 5720A  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Resistor</b>  DC Resistance Meters  Multimeter Resistor Ohmmeter	1,9 $\Omega$	4 Wires (2-Wire for 100 M $\Omega$ )	98 $\mu\Omega/\Omega$	<b>R: Measured Resistance,<math>\Omega</math></b>  Direct Comparison Method with FLUKE 5720A  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Resistor</b>  DC Resistance Meters  Multimeter Resistor Ohmmeter	10 $\Omega$	4 Wires (2-Wire for 100 M $\Omega$ )	25 $\mu\Omega/\Omega$	<b>R: Measured Resistance,<math>\Omega</math></b>  Direct Comparison Method with FLUKE 5720A  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Resistor</b>  DC Resistance Meters  Multimeter Resistor Ohmmeter	19 $\Omega$	4 Wires (2-Wire for 100 M $\Omega$ )	26 $\mu\Omega/\Omega$	<b>R: Measured Resistance,<math>\Omega</math></b>  Direct Comparison Method with FLUKE 5720A  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Ohmmeter	100 Ω	4 Wires (2-Wire for 100 MΩ)	12 μΩ/Ω	<b>R:</b> Measured Resistance,Ω Direct Comparison Method with FLUKE 5720A  • In customer place • In the laboratory calibration is made.
<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Ohmmeter	190 Ω	4 Wires (2-Wire for 100 MΩ)	13 μΩ/Ω	<b>R:</b> Measured Resistance,Ω Direct Comparison Method with FLUKE 5720A  • In customer place • In the laboratory calibration is made.
<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Ohmmeter	1 kΩ	4 Wires (2-Wire for 100 MΩ)	10 μΩ/Ω	<b>R:</b> Measured Resistance,Ω Direct Comparison Method with FLUKE 5720A  • In customer place • In the laboratory calibration is made.
<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Ohmmeter	1,9 kΩ	4 Wires (2-Wire for 100 MΩ)	12 μΩ/Ω	<b>R:</b> Measured Resistance,Ω Direct Comparison Method with FLUKE 5720A  • In customer place • In the laboratory calibration is made.
<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Ohmmeter	10 kΩ	4 Wires (2-Wire for 100 MΩ)	10 μΩ/Ω	<b>R:</b> Measured Resistance,Ω Direct Comparison Method with FLUKE 5720A  • In customer place • In the laboratory calibration is made.
<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Ohmmeter	19 kΩ	4 Wires (2-Wire for 100 MΩ)	12 μΩ/Ω	<b>R:</b> Measured Resistance,Ω Direct Comparison Method with FLUKE 5720A  • In customer place • In the laboratory calibration is made.
<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Ohmmeter	100 kΩ	4 Wires (2-Wire for 100 MΩ)	13 μΩ/Ω	<b>R:</b> Measured Resistance,Ω Direct Comparison Method with FLUKE 5720A  • In customer place • In the laboratory calibration is made.



Calibration  
TS EN ISO/IEC 17025  
AB-0092-K

## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Ohmmeter	190 kΩ	4 Wires (2-Wire for 100 MΩ)	14 μΩ/Ω	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with FLUKE 5720A  • In customer place • In the laboratory  calibration is made.
<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Ohmmeter	1 MΩ	4 Wires (2-Wire for 100 MΩ)	21 μΩ/Ω	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with FLUKE 5720A Calibrator  • In customer place • In the laboratory  <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Ohmmeter	1,9 MΩ	4 Wires (2-Wire for 100 MΩ)	27 μΩ/Ω	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with FLUKE 5720A Calibrator  • In customer place • In the laboratory  <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Ohmmeter	10 MΩ	4 Wires (2-Wire for 100 MΩ)	41 μΩ/Ω	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with FLUKE 5720A Calibrator  • In customer place • In the laboratory  <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Ohmmeter	19 MΩ	4 Wires (2-Wire for 100 MΩ)	55 μΩ/Ω	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with FLUKE 5720A Calibrator  • In customer place • In the laboratory  <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Ohmmeter	100 MΩ	4 Wires (2-Wire for 100 MΩ)	0,11 mΩ/Ω	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with FLUKE 5720A Calibrator  • In customer place • In the laboratory  <i>calibration is made.</i>



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Ohmmeter	$0 \Omega \leq R < 11 \Omega$		$31 \cdot 10^{-6} \cdot R + 7,8 \text{ m}\Omega$	<b>R:</b> Measured Resistance, $\Omega$  Direct Comparison Method with FLUKE 5522A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Ohmmeter	$11 \Omega \leq R < 33 \Omega$		$23 \cdot 10^{-6} \cdot R + 12 \text{ m}\Omega$	<b>R:</b> Measured Resistance, $\Omega$  Direct Comparison Method with FLUKE 5522A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Ohmmeter	$33 \Omega \leq R \leq 110 \Omega$		$22 \cdot 10^{-6} \cdot R + 12 \text{ m}\Omega$	<b>R:</b> Measured Resistance, $\Omega$  Direct Comparison Method with FLUKE 5522A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Ohmmeter	$110 \Omega < R \leq 330 \Omega$		$22 \cdot 10^{-6} \cdot R + 16 \text{ m}\Omega$	<b>R:</b> Measured Resistance, $\Omega$  Direct Comparison Method with FLUKE 5522A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Ohmmeter	$330 \Omega < R \leq 1,1 \text{ k}\Omega$		$21 \cdot 10^{-6} \cdot R + 18 \text{ m}\Omega$	<b>R:</b> Measured Resistance, $\Omega$  Direct Comparison Method with FLUKE 5522A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters  Multimeter Resistor Ohmmeter	$1,1 \text{ k}\Omega < R \leq 3,3 \text{ k}\Omega$		$21 \cdot 10^{-6} \cdot R + 24 \text{ m}\Omega$	<b>R:</b> Measured Resistance, $\Omega$  Direct Comparison Method with FLUKE 5522A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>





## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>DC Resistor</b> DC Resistance Meters Multimeter Resistor Ohmmeter	3,3 kΩ < R ≤ 11 kΩ		$21 \cdot 10^{-6} \cdot R + 0,11 \Omega$	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with FLUKE 5522A Calibrator <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters Multimeter Resistor Ohmmeter	11 kΩ < R ≤ 33 kΩ		$22 \cdot 10^{-6} \cdot R + 0,81 \Omega$	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with FLUKE 5522A Calibrator <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters Multimeter Resistor Ohmmeter	33 kΩ < R ≤ 110 kΩ		$21 \cdot 10^{-6} \cdot R + 1,1 \Omega$	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with FLUKE 5522A Calibrator <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters Multimeter Resistor Ohmmeter	110 kΩ < R ≤ 330 kΩ		$24 \cdot 10^{-6} \cdot R + 8,9 \Omega$	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with FLUKE 5522A Calibrator <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters Multimeter Resistor Ohmmeter	330 kΩ < R ≤ 1,1 MΩ		$12 \cdot 10^{-6} \cdot R + 49 \Omega$	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with FLUKE 5522A Calibrator <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters Multimeter Resistor Ohmmeter	1,1 MΩ < R ≤ 3,3 MΩ		$29 \cdot 10^{-6} \cdot R + 0,3 \text{ k}\Omega$	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with FLUKE 5522A Calibrator <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>



Calibration  
TS EN ISO/IEC 17025  
AB-0092-K

## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>DC Resistor</b>  DC Resistance Meters  Multimeter Resistor Ohmmeter	$3,3 \text{ M}\Omega < R \leq 11 \text{ M}\Omega$		$67 \cdot 10^{-6} \cdot R + 0,92 \text{ k}\Omega$	<b>R:</b> Measured Resistance, $\Omega$  Direct Comparison Method with FLUKE 5522A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b>  DC Resistance Meters  Multimeter Resistor Ohmmeter	$11 \text{ M}\Omega < R \leq 33 \text{ M}\Omega$		$74 \cdot 10^{-6} \cdot R + 15 \text{ k}\Omega$	<b>R:</b> Measured Resistance, $\Omega$  Direct Comparison Method with FLUKE 5522A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b>  DC Resistance Meters  Multimeter Resistor Ohmmeter	$33 \text{ M}\Omega < R \leq 110 \text{ M}\Omega$		$0,14 \cdot 10^{-3} \cdot R + 77 \text{ k}\Omega$	<b>R:</b> Measured Resistance, $\Omega$  Direct Comparison Method with FLUKE 5522A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b>  DC Resistance Meters  Multimeter Resistor Ohmmeter	$110 \text{ M}\Omega < R \leq 330 \text{ M}\Omega$		$2,3 \cdot 10^{-3} \cdot R + 43 \text{ k}\Omega$	<b>R:</b> Measured Resistance, $\Omega$  Direct Comparison Method with FLUKE 5522A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b>  DC Resistance Meters  Multimeter Resistor Ohmmeter	$330 \text{ M}\Omega \leq R \leq 1100 \text{ M}\Omega$		$12 \cdot 10^{-3} R + 0,45 \text{ M}\Omega$	<b>R:</b> Measured Resistance, $\Omega$  Direct Comparison Method with FLUKE 5522A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b>  DC Resistance Meters  Multimeter Resistor Ohmmeter	$1,1 \text{ G}\Omega \leq R \leq 2 \text{ G}\Omega$		$11 \text{ m}\Omega/\Omega$	<b>R:</b> Measured Resistance, $\Omega$  Direct Comparison Method with FLUKE 5320A Calibrator  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>DC Resistor</b> DC Resistance Meters Insulation Tester	$1 \text{ G}\Omega \leq R \leq 10 \text{ G}\Omega$	250 V	$8 \cdot 10^{-4} \cdot R$	<b>R:</b> Measured Resistance, $\Omega$ Direct Comparison Method with Decade Resistance <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters Insulation Tester	$1 \text{ G}\Omega \leq R \leq 10 \text{ G}\Omega$	500 V	$1,1 \cdot 10^{-3} \cdot R$	<b>R:</b> Measured Resistance, $\Omega$ Direct Comparison Method with Decade Resistance <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters Insulation Tester	$1 \text{ G}\Omega \leq R \leq 10 \text{ G}\Omega$	1000 V	$1,7 \cdot 10^{-3} \cdot R$	<b>R:</b> Measured Resistance, $\Omega$ Direct Comparison Method with Decade Resistance <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters Insulation Tester	$1 \text{ G}\Omega \leq R \leq 10 \text{ G}\Omega$	2500 V	$3,9 \cdot 10^{-3} \cdot R$	<b>R:</b> Measured Resistance, $\Omega$ Direct Comparison Method with Decade Resistance <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters Insulation Tester	$1 \text{ G}\Omega \leq R \leq 10 \text{ G}\Omega$	5000 V	$7,6 \cdot 10^{-3} \cdot R$	<b>R:</b> Measured Resistance, $\Omega$ Direct Comparison Method with Decade Resistance <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters Insulation Tester	$10 \text{ G}\Omega < R \leq 100 \text{ G}\Omega$	250 V	$3,9 \cdot 10^{-3} \cdot R$	<b>R:</b> Measured Resistance, $\Omega$ Direct Comparison Method with Decade Resistance <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>



Calibration  
TS EN ISO/IEC 17025  
AB-0092-K

## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>DC Resistor</b> DC Resistance Meters Insulation Tester	10 GΩ < R ≤ 100 GΩ	500 V	$4,5 \cdot 10^{-3} \cdot R$	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with Decade Resistance <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters Insulation Tester	10 GΩ < R ≤ 100 GΩ	1000 V	$6,3 \cdot 10^{-3} \cdot R$	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with Decade Resistance <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters Insulation Tester	10 GΩ < R ≤ 100 GΩ	2500 V	$1,4 \cdot 10^{-2} \cdot R$	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with Decade Resistance <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters Insulation Tester	10 GΩ < R ≤ 100 GΩ	5000 V	$2,6 \cdot 10^{-2} \cdot R$	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with Decade Resistance <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters Insulation Tester	100 GΩ < R ≤ 1 TΩ	250 V	$4,1 \cdot 10^{-3} \cdot R$	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with Decade Resistance <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters Insulation Tester	100 GΩ < R ≤ 1 TΩ	500 V	$4,7 \cdot 10^{-3} \cdot R$	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with Decade Resistance <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>DC Resistor</b> DC Resistance Meters Insulation Tester	100 GΩ < R ≤ 1 TΩ	1000 V	$6,4 \cdot 10^{-3} \cdot R$	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with Decade Resistance <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters Insulation Tester	100 GΩ < R ≤ 1 TΩ	2500 V	$1,4 \cdot 10^{-2} \cdot R$	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with Decade Resistance <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Meters Insulation Tester	100 GΩ < R ≤ 1 TΩ	5000 V	$2,6 \cdot 10^{-2} \cdot R$	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with Decade Resistance <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Standards and Resources DC Resistance Standard Resistance Box Calibrator: Resistor DC Resistance Source	$1 \text{ m}\Omega \leq R \leq 2 \Omega$	4-wire	$11 \cdot 10^{-6} \cdot R + 4 \mu\Omega$	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with FLUKE 8508A Reference Multimeter <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Standards and Resources DC Resistance Standard Resistance Box Calibrator: Resistor DC Resistance Source	$2 \Omega < R \leq 20 \Omega$	4-wire	$7,7 \cdot 10^{-6} \cdot R + 26 \mu\Omega$	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with FLUKE 8508A Reference Multimeter <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Resistor</b> DC Resistance Standards and Resources DC Resistance Standard Resistance Box Calibrator: Resistor DC Resistance Source	$20 \Omega < R \leq 200 \Omega$	4-wire	$10 \mu\Omega/\Omega$	<b>R:</b> Measured Resistance, Ω Direct Comparison Method with FLUKE 8508A Reference Multimeter <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<p><b>DC Resistor</b></p> <p>DC Resistance Standards and Resources</p> <p>DC Resistance Standard Resistance Box Calibrator: Resistor DC Resistance Source</p>	$200 \Omega < R \leq 2 \text{ k}\Omega$	4-wire	$10 \mu\Omega/\Omega$	<p><b>R:</b> Measured Resistance, <math>\Omega</math></p> <p>Direct Comparison Method with FLUKE 8508A Reference Multimeter</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p><i>calibration is made.</i></p>
<p><b>DC Resistor</b></p> <p>DC Resistance Standards and Resources</p> <p>DC Resistance Standard Resistance Box Calibrator: Resistor DC Resistance Source</p>	$2 \text{ k}\Omega < R \leq 20 \text{ k}\Omega$	4-wire	$10 \mu\Omega/\Omega$	<p><b>R:</b> Measured Resistance, <math>\Omega</math></p> <p>Direct Comparison Method with FLUKE 8508A Reference Multimeter</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p><i>calibration is made.</i></p>
<p><b>DC Resistor</b></p> <p>DC Resistance Standards and Resources</p> <p>DC Resistance Standard Resistance Box Calibrator: Resistor DC Resistance Source</p>	$20 \text{ k}\Omega < R \leq 200 \text{ k}\Omega$	4-wire	$11 \mu\Omega/\Omega$	<p><b>R:</b> Measured Resistance, <math>\Omega</math></p> <p>Direct Comparison Method with FLUKE 8508A Reference Multimeter</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p><i>calibration is made.</i></p>
<p><b>DC Resistor</b></p> <p>DC Resistance Standards and Resources</p> <p>DC Resistance Standard Resistance Box Calibrator: Resistor DC Resistance Source</p>	$200 \text{ k}\Omega < R \leq 2 \text{ M}\Omega$	4-wire or 2-wire	$14 \mu\Omega/\Omega$	<p><b>R:</b> Measured Resistance, <math>\Omega</math></p> <p>Direct Comparison Method with FLUKE 8508A Reference Multimeter</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p><i>calibration is made.</i></p>
<p><b>DC Resistor</b></p> <p>DC Resistance Standards and Resources</p> <p>DC Resistance Standard Resistance Box Calibrator: Resistor DC Resistance Source</p>	$2 \text{ M}\Omega < R \leq 20 \text{ M}\Omega$	4-wire or 2-wire	$16 \cdot 10^{-6} \cdot R + 91 \Omega$	<p><b>R:</b> Measured Resistance, <math>\Omega</math></p> <p>Direct Comparison Method with FLUKE 8508A Reference Multimeter</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p><i>calibration is made.</i></p>
<p><b>DC Resistor</b></p> <p>DC Resistance Standards and Resources</p> <p>DC Resistance Standard Resistance Box Calibrator: Resistor DC Resistance Source</p>	$20 \text{ M}\Omega < R \leq 200 \text{ M}\Omega$	4-wire or 2-wire	$51 \cdot 10^{-6} \cdot R + 9,7 \text{ k}\Omega$	<p><b>R:</b> Measured Resistance, <math>\Omega</math></p> <p>Direct Comparison Method with FLUKE 8508A Reference Multimeter</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p><i>calibration is made.</i></p>



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>DC Resistor</b>  DC Resistance Standards and Resources  DC Resistance Standard Resistance Box Calibrator: Resistor DC Resistance Source	200 MΩ < R ≤ 2 GΩ	4-wire or 2 -wire	$0,52 \cdot 10^{-3} \cdot R + 1 \text{ M}\Omega$	<b>R</b> : Measured Resistance, Ω  Direct Comparison Method with FLUKE 8508A Reference Multimeter  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>Capacitance</b>  Capacitance Meters  LCR Meter: Capacitance Multimeter: Capacitance	220 pF ≤ C < 400 pF	10 Hz ≤ f ≤ 10 kHz	$3,7 \cdot 10^{-3} \cdot C + 9 \text{ pF}$	<b>C</b> : Measured Capacitance, F  <b>f</b> : Frequency, Hz  Direct Comparison Method with FLUKE 5522A  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>Capacitance</b>  Capacitance Meters  LCR Meter: Capacitance Multimeter: Capacitance	0,4 nF ≤ C < 1,1 nF	10 Hz ≤ f ≤ 10 kHz	$3,6 \cdot 10^{-3} \cdot C + 10 \text{ pF}$	<b>C</b> : Measured Capacitance, F  <b>f</b> : Frequency, Hz  Direct Comparison Method with FLUKE 5522A  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>Capacitance</b>  Capacitance Meters  LCR Meter: Capacitance Multimeter: Capacitance	1,1 nF ≤ C < 3,3 nF	10 Hz ≤ f ≤ 3 kHz	$3,9 \cdot 10^{-3} \cdot C + 10 \text{ pF}$	<b>C</b> : Measured Capacitance, F  <b>f</b> : Frequency, Hz  Direct Comparison Method with FLUKE 5522A  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>Capacitance</b>  Capacitance Meters  LCR Meter: Capacitance Multimeter: Capacitance	3,3 nF ≤ C < 11 nF	10 Hz ≤ f ≤ 1 kHz	$1,6 \cdot 10^{-3} \cdot C + 17 \text{ pF}$	<b>C</b> : Measured Capacitance, F  <b>f</b> : Frequency, Hz  Direct Comparison Method with FLUKE 5522A  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>Capacitance</b>  Capacitance Meters  LCR Meter: Capacitance Multimeter: Capacitance	11 nF ≤ C < 33 nF	10 Hz ≤ f ≤ 1 kHz	$1,9 \cdot 10^{-3} \cdot C + 92 \text{ pF}$	<b>C</b> : Measured Capacitance, F  <b>f</b> : Frequency, Hz  Direct Comparison Method with FLUKE 5522A  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>Capacitance</b> Capacitance Meters  LCR Meter: Capacitance Multimeter: Capacitance	$33 \text{ nF} \leq C < 110 \text{ nF}$	$10 \text{ Hz} \leq f \leq 1 \text{ kHz}$	$1,5 \cdot 10^{-3} \cdot C + 0,21 \text{ nF}$	<b>C</b> : Measured Capacitance, F  <b>f</b> : Frequency, Hz  Direct Comparison Method with FLUKE 5522A  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>Capacitance</b> Capacitance Meters  LCR Meter: Capacitance Multimeter: Capacitance	$110 \text{ nF} \leq C < 330 \text{ nF}$	$10 \text{ Hz} \leq f \leq 1 \text{ kHz}$	$1,5 \cdot 10^{-3} \cdot C + 0,56 \text{ nF}$	<b>C</b> : Measured Capacitance, F  <b>f</b> : Frequency, Hz  Direct Comparison Method with FLUKE 5522A  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>Capacitance</b> Capacitance Meters  LCR Meter: Capacitance Multimeter: Capacitance	$0,33 \text{ nF} \leq C < 1,1 \mu\text{F}$	$10 \text{ Hz} \leq f \leq 600 \text{ Hz}$	$1,5 \cdot 10^{-3} \cdot C + 2 \text{ nF}$	<b>C</b> : Measured Capacitance, F  <b>f</b> : Frequency, Hz  Direct Comparison Method with FLUKE 5522A  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>Capacitance</b> Capacitance Meters  LCR Meter: Capacitance Multimeter: Capacitance	$1,1 \mu\text{F} \leq C < 3,3 \mu\text{F}$	$10 \text{ Hz} \leq f \leq 300 \text{ Hz}$	$1,5 \cdot 10^{-3} \cdot C + 5,6 \text{ nF}$	<b>C</b> : Measured Capacitance, F  <b>f</b> : Frequency, Hz  Direct Comparison Method with FLUKE 5522A  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>Capacitance</b> Capacitance Meters  LCR Meter: Capacitance Multimeter: Capacitance	$3,3 \mu\text{F} \leq C < 11 \mu\text{F}$	$10 \text{ Hz} \leq f \leq 150 \text{ Hz}$	$1,3 \cdot 10^{-3} \cdot C + 26 \text{ nF}$	<b>C</b> : Measured Capacitance, F  <b>f</b> : Frequency, Hz  Direct Comparison Method with FLUKE 5522A  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>Capacitance</b> Capacitance Meters  LCR Meter: Capacitance Multimeter: Capacitance	$11 \mu\text{F} \leq C < 33 \mu\text{F}$	$10 \text{ Hz} \leq f \leq 120 \text{ Hz}$	$2,3 \cdot 10^{-3} \cdot C + 76 \text{ nF}$	<b>C</b> : Measured Capacitance, F  <b>f</b> : Frequency, Hz  Direct Comparison Method with FLUKE 5522A  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>





## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>Capacitance</b> Capacitance Meters LCR Meter: Capacitance Multimeter: Capacitance	$33 \mu\text{F} \leq C < 110 \mu\text{F}$	$10 \text{ Hz} \leq f \leq 80 \text{ Hz}$	$2,6 \cdot 10^{-3} \cdot C + 0,29 \mu\text{F}$	<b>C</b> : Measured Capacitance, F <b>f</b> : Frequency, Hz Direct Comparison Method with FLUKE 5522A <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>Capacitance</b> Capacitance Meters LCR Meter: Capacitance Multimeter: Capacitance	$110 \mu\text{F} \leq C < 330 \mu\text{F}$	$0 \text{ Hz} \leq f \leq 50 \text{ Hz}$	$3,1 \cdot 10^{-3} \cdot C + 0,49 \mu\text{F}$	<b>C</b> : Measured Capacitance, F <b>f</b> : Frequency, Hz Direct Comparison Method with FLUKE 5522A <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>Capacitance</b> Capacitance Meters LCR Meter: Capacitance Multimeter: Capacitance	$0,33 \text{ mF} \leq C < 1,1 \text{ mF}$	$0 \text{ Hz} \leq f \leq 20 \text{ Hz}$	$3,0 \cdot 10^{-3} \cdot C + 1,8 \mu\text{F}$	<b>C</b> : Measured Capacitance, F <b>f</b> : Frequency, Hz Direct Comparison Method with FLUKE 5522A <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>Capacitance</b> Capacitance Meters LCR Meter: Capacitance Multimeter: Capacitance	$1,1 \text{ mF} \leq C < 3,3 \text{ mF}$	$0 \text{ Hz} \leq f \leq 6 \text{ Hz}$	$2,8 \cdot 10^{-3} \cdot C + 6,7 \mu\text{F}$	<b>C</b> : Measured Capacitance, F <b>f</b> : Frequency, Hz Direct Comparison Method with FLUKE 5522A <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>Capacitance</b> Capacitance Meters LCR Meter: Capacitance Multimeter: Capacitance	$3,3 \text{ mF} \leq C < 11 \text{ mF}$	$0 \text{ Hz} \leq f \leq 2 \text{ Hz}$	$3,0 \cdot 10^{-3} \cdot C + 18 \mu\text{F}$	<b>C</b> : Measured Capacitance, F <b>f</b> : Frequency, Hz Direct Comparison Method with FLUKE 5522A <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>Capacitance</b> Capacitance Meters LCR Meter: Capacitance Multimeter: capacitance	$11 \text{ mF} \leq C < 33 \text{ mF}$	$0 \text{ Hz} \leq f \leq 0,6 \text{ Hz}$	$4,4 \cdot 10^{-3} \cdot C + 0,11 \text{ mF}$	<b>C</b> : Measured Capacitance, F <b>f</b> : Frequency, Hz Direct Comparison Method with FLUKE 5522A <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>Capacitance</b> Capacitance Meters LCR Meter: Capacitance Multimeter: Capacitance	$33 \text{ mF} \leq C \leq 110 \text{ mF}$	$0 \text{ Hz} \leq f \leq 0,2 \text{ Hz}$	$7,5 \cdot 10^{-2} \cdot C + 0,28 \text{ mF}$	<b>C</b> : Measured Capacitance, F <b>f</b> : Frequency, Hz Direct Comparison Method with FLUKE 5522A <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>AC High Voltage</b> AC High Voltage Sources	$1 \text{ kV} \leq U \leq 10 \text{ kV}$	60 Hz	0,27 %	<b>U</b> : Measured Voltage, V With High Voltage Divider and Multimeter IEC 60060-1 IEC 60060-2 IEC 60060-3 <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC High Voltage</b> DC High Voltage Sources	$1 \text{ kV} < U \leq 15 \text{ kV}$		0,15 %	<b>U</b> : Measured Voltage, V With High Voltage Divider and Multimeter IEC 60060-1 IEC 60060-2 IEC 60060-3 <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Power and Energy</b> Power Meter Wattmeter	$0,011 \text{ W} < P \leq 33 \text{ W}$	$3,3 \text{ V} \leq U \leq 1000 \text{ V}$ $3,3 \text{ mA} \leq I \leq 33 \text{ mA}$	$1,5 \cdot 10^{-4} \cdot P + 4,7 \mu\text{W}$	<b>P</b> : Power, W <b>U</b> : Voltage, V <b>I</b> : Current, A Direct measurement method with FLUKE 5522A <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.
<b>DC Power and Energy</b> Power Meter Wattmeter	$0,11 \text{ W} < P \leq 330 \text{ W}$	$3,3 \text{ V} \leq U \leq 1000 \text{ V}$ $33 \text{ mA} \leq I \leq 330 \text{ mA}$	$1,4 \cdot 10^{-4} \cdot P + 49 \mu\text{W}$	<b>P</b> : Power, W <b>U</b> : Voltage, V <b>I</b> : Current, A Direct measurement method with FLUKE 5522A <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> calibration is made.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>DC Power and Energy</b>  Power Meter Wattmeter	$1,1 \text{ W} < P \leq 3000 \text{ W}$	$3,3 \text{ V} \leq U \leq 1000 \text{ V}$ $330 \text{ mA} \leq I \leq 3 \text{ A}$	$4,7 \cdot 10^{-4} \cdot P + 0,12 \text{ mW}$	<b>P</b> : Power, W  <b>U</b> : Voltage, V  <b>I</b> : Current, A  Direct measurement method with FLUKE 5522A  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Power and Energy</b>  Power Meter Wattmeter	$9,9 \text{ W} < P \leq 11 \text{ kW}$	$3,3 \text{ V} \leq U \leq 1000 \text{ V}$ $3 \text{ A} \leq I \leq 11 \text{ A}$	$1,4 \cdot 10^{-3} \cdot P - 5,8 \text{ mW}$	<b>P</b> : Power, W  <b>U</b> : Voltage, V  <b>I</b> : Current, A  Direct measurement method with FLUKE 5522A  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>DC Power and Energy</b>  Power Meter Wattmeter	$33 \text{ W} < P \leq 20 \text{ kW}$	$3,3 \text{ V} \leq U \leq 1000 \text{ V}$ $11 \text{ A} \leq I \leq 20 \text{ A}$	$1,2 \cdot 10^{-3} \cdot P + 4,7 \text{ mW}$	<b>P</b> : Power, W  <b>U</b> : Voltage, V  <b>I</b> : Current, A  Direct measurement method with FLUKE 5522A  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>
<b>AC Power and Energy</b>  Active Power: Three Phase  Power Meter Wattmeter	$0,011 \text{ W} < P \leq 33 \text{ W}$	$3,3 \text{ V} \leq U \leq 1000 \text{ V}$ $3,3 \text{ mA} \leq I \leq 33 \text{ mA}$ $0 \leq f \leq 55 \text{ Hz}$ PF: 1	$1,8 \cdot 10^{-3} \cdot P + 0,18 \text{ mW}$	<b>P</b> : Power, W  <b>U</b> : Voltage, V  <b>I</b> : Current, A  <b>f</b> : Frequency, Hz  <b>PF</b> : Power Factor  Direct measurement method with FLUKE 5522A  <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <i>calibration is made.</i>



Calibration  
TS EN ISO/IEC 17025  
AB-0092-K

## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<p><b>AC Power and Energy</b></p> <p>Active Power: Three Phase</p> <p>Power Meter Wattmeter</p>	$0,011 \text{ W} < P \leq 33 \text{ W}$	$3,3 \text{ V} \leq U \leq 1000 \text{ V}$ $3,3 \text{ mA} \leq I \leq 33 \text{ mA}$ $55 \text{ Hz} \leq f \leq 1 \text{ kHz}$ PF:1	$1,8 \cdot 10^{-3} \cdot P + 0,18 \text{ mW}$	<p><b>P</b>: Power, W</p> <p><b>U</b>: Voltage, V</p> <p><b>I</b>: Current, A</p> <p><b>f</b>: Frequency, Hz</p> <p><b>PF</b>: Power Factor</p> <p>Direct measurement method with FLUKE 5522A</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p>calibration is made.</p>
<p><b>AC Power and Energy</b></p> <p>Active Power: Three Phase</p> <p>Power Meter Wattmeter</p>	$0,11 \text{ W} < P \leq 330 \text{ W}$	$3,3 \text{ V} \leq U \leq 1000 \text{ V}$ $33 \text{ mA} \leq I \leq 330 \text{ mA}$ $0 \leq f \leq 55 \text{ Hz}$ PF: 1	$1,3 \cdot 10^{-3} \cdot P + 1,3 \text{ mW}$	<p><b>P</b>: Power, W</p> <p><b>U</b>: Voltage, V</p> <p><b>I</b>: Current, A</p> <p><b>f</b>: Frequency, Hz</p> <p><b>PF</b>: Power Factor</p> <p>Direct measurement method with FLUKE 5522A</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p>calibration is made.</p>
<p><b>AC Power and Energy</b></p> <p>Active Power: Three Phase</p> <p>Power Meter Wattmeter</p>	$0,11 \text{ W} < P \leq 330 \text{ W}$	$3,3 \text{ V} \leq U \leq 1000 \text{ V}$ $33 \text{ mA} \leq I \leq 330 \text{ mA}$ $55 \text{ Hz} \leq f \leq 1 \text{ kHz}$ PF: 1	$1,3 \cdot 10^{-3} \cdot P + 1,3 \text{ mW}$	<p><b>P</b>: Power, W</p> <p><b>U</b>: Voltage, V</p> <p><b>I</b>: Current, A</p> <p><b>f</b>: Frequency, Hz</p> <p><b>PF</b>: Power Factor</p> <p>Direct measurement method with FLUKE 5522A</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p>calibration is made.</p>
<p><b>AC Power and Energy</b></p> <p>Active Power: Three Phase</p> <p>Power Meter Wattmeter</p>	$1,1 \text{ W} < P \leq 3000 \text{ W}$	$3,3 \text{ V} \leq U \leq 1000 \text{ V}$ $330 \text{ mA} \leq I \leq 3 \text{ A}$ $0 \leq f \leq 55 \text{ Hz}$ PF: 1	$7,4 \cdot 10^{-3} \cdot P + 65 \text{ mW}$	<p><b>P</b>: Power, W</p> <p><b>U</b>: Voltage, V</p> <p><b>I</b>: Current, A</p> <p><b>f</b>: Frequency, Hz</p> <p><b>PF</b>: Power Factor</p> <p>Direct measurement method with FLUKE 5522A</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p>calibration is made.</p>



Calibration  
TS EN ISO/IEC 17025  
AB-0092-K

## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<p><b>AC Power and Energy</b></p> <p>Active Power: Three Phase</p> <p>Power Meter Wattmeter</p>	$1,1 \text{ W} < P \leq 3000 \text{ W}$	$3,3 \text{ V} \leq U \leq 1000 \text{ V}$ $330 \text{ mA} \leq I \leq 3 \text{ A}$ $55 \text{ Hz} \leq f \leq 1 \text{ kHz}$ PF: 1	$7,4 \cdot 10^{-3} \cdot P + 65 \text{ mW}$	<p><b>P</b> : Power, W</p> <p><b>U</b>: Voltage, V</p> <p><b>I</b>: Current, A</p> <p><b>f</b>: Frequency, Hz</p> <p><b>PF</b>: Power Factor</p> <p>Direct measurement method with FLUKE 5522A</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p>calibration is made.</p>
<p><b>AC Power and Energy</b></p> <p>Active Power: Three Phase</p> <p>Power Meter Wattmeter</p>	$9,5 \text{ W} < P \leq 11000 \text{ W}$	$3,3 \text{ V} \leq U \leq 1000 \text{ V}$ $3 \text{ A} \leq I \leq 11 \text{ A}$ $0 \text{ Hz} \leq f \leq 55 \text{ Hz}$ PF: 1	$1,6 \cdot 10^{-2} \cdot P + 0,42 \text{ W}$	<p><b>P</b> : Power, W</p> <p><b>U</b>: Voltage, V</p> <p><b>I</b>: Current, A</p> <p><b>f</b>: Frequency, Hz</p> <p><b>PF</b>: Power Factor</p> <p>Direct measurement method with FLUKE 5522A</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p>calibration is made.</p>
<p><b>AC Power and Energy</b></p> <p>Active Power: Three Phase</p> <p>Power Meter Wattmeter</p>	$9,5 \text{ W} < P \leq 11000 \text{ W}$	$3,3 \text{ V} \leq U \leq 1000 \text{ V}$ $3 \text{ A} \leq I \leq 11 \text{ A}$ $55 \text{ Hz} \leq f \leq 1 \text{ kHz}$ PF: 1	$1,6 \cdot 10^{-2} \cdot P + 0,42 \text{ W}$	<p><b>P</b> : Power, W</p> <p><b>U</b>: Voltage, V</p> <p><b>I</b>: Current, A</p> <p><b>f</b>: Frequency, Hz</p> <p><b>PF</b>: Power Factor</p> <p>Direct measurement method with FLUKE 5522A</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p>calibration is made.</p>
<p><b>AC Power and Energy</b></p> <p>Active Power: Three Phase</p> <p>Power Meter Wattmeter</p>	$36,3 \text{ W} < P \leq 20 \text{ kW}$	$3,3 \text{ V} \leq U \leq 1000 \text{ V}$ $11 \text{ A} \leq I \leq 20 \text{ A}$ $0 \text{ Hz} \leq f \leq 55 \text{ Hz}$ PF: 1	$8,6 \cdot 10^{-3} \cdot P + 0,26 \text{ W}$	<p><b>P</b> : Power, W</p> <p><b>U</b>: Voltage, V</p> <p><b>I</b>: Current, A</p> <p><b>f</b>: Frequency, Hz</p> <p><b>PF</b>: Power Factor</p> <p>Direct measurement method with FLUKE 5522A</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p>calibration is made.</p>




Calibration  
TS EN ISO/IEC 17025  
AB-0092-K

## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<p><b>AC Power and Energy</b></p> <p>Active Power: Three Phase</p> <p>Power Meter Wattmeter</p>	$36,3 \text{ W} < P \leq 20 \text{ kW}$	$3,3 \text{ V} \leq U \leq 1000 \text{ V}$ $11 \text{ A} \leq I \leq 20 \text{ A}$ $55 \text{ Hz} \leq f \leq 1 \text{ kHz}$ PF: 1	$8,6 \cdot 10^{-3} \cdot P + 0,26 \text{ W}$	<p><b>P</b> : Power, W</p> <p><b>U</b>: Voltage, V</p> <p><b>I</b>: Current, A</p> <p><b>f</b>: Frequency, Hz</p> <p><b>PF</b>: Power Factor</p> <p>Direct measurement method with FLUKE 5522A</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p>calibration is made.</p>
<p><b>Signal and Pulse Characteristics</b></p> <p>Vertical Deflection (Gain)</p> <p>Oscilloscope</p>	$1 \text{ mV} \leq U < 5 \text{ V}$	DC $50 \Omega - 1 \text{ M}\Omega$	$3,5 \cdot 10^{-3} \cdot U + 22 \mu\text{V}$	<p><b>U</b>: Measured voltage, V</p> <p>Direct measurement method with FLUKE 9500B</p> <ul style="list-style-type: none"> <li>In customer place</li> <li>In the laboratory</li> </ul> <p>calibration is made.</p>

This document has been signed by Gülden Banu Müderrisoğlu with a secure electronic signature in accordance with the electronic signature law numbered 5070. Use the QR code to verify the e-signed document.


 <p>Calibration TS EN ISO/IEC 17025 AB-0092-K</p>	<p><b>TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ</b></p> <p>Accreditation Nr: AB-0092-K Revision Nr: 14 Date: 07.06.2024</p>
--	---

Calibration and Measurement Capability (CMC)

Magnetic Quantities

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
<b>DC Magnetic Flux Density and Intensity</b> Magnetic Field Intensity Meter	0 G ≤ H ≤ 100 G	Analogue Horizontal / Vertical	$1,4 \cdot 10^{-4} \cdot H + 0,6 \text{ G}$	H : Measured Magnetic Field Comparison method with automatic Helmholtz calibration system
<b>DC Magnetic Flux Density and Intensity</b> Magnetic Field Intensity Meter	0 G ≤ H ≤ 100 G	Analoque Horizontal / Vertical	$7,8 \cdot 10^{-3} \cdot H + 0,002 \text{ G}$	H : Measured Magnetic Field • Comparison method with automatic Helmholtz calibration system

This document has been signed by Gülден Banu Müderrisoğlu with a secure electronic signature in accordance with the electronic signature law numbered 5070. Use the QR code to verify the e-signed document.

 <p>Calibration TS EN ISO/IEC 17025 AB-0092-K</p>	<p><b>TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ</b></p> <p>Accreditation Nr: AB-0092-K Revision Nr: 14 Date: 07.06.2024</p>
--	---

**Calibration and Measurement Capability (CMC)**

**Mass (Mass Standards)**

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
<b>Weight Standard</b> F1 Standard Weights	1 g	-	0,03 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F1 Standard Weights	2 g	-	0,04 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F1 Standard Weights	5 g	-	0,05 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F1 Standard Weights	10 g	-	0,06 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F1 Standard Weights	20 g	-	0,08 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F1 Standard Weights	50 g	-	0,1 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F1 Standard Weights	100 g	-	0,16 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F1 Standard Weights	200 g	-	0,3 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F1 Standard Weights	500 g	-	0,8 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F1 Standard Weights	1 kg	-	1,6 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F1 Standard Weights	2 kg	-	3,0 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.





## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>Weight Standard</b> F1 Standard Weights	5 kg	-	8,0 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F1 Standard Weights	10 kg	-	16 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F2 Standard Weights	1 g	-	0,10 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F2 Standard Weights	2 g	-	0,12 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F2 Standard Weights	5 g	-	0,16 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F2 Standard Weights	10 g	-	0,20 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F2 Standard Weights	20 g	-	0,25 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F2 Standard Weights	50 g	-	0,3 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F2 Standard Weights	100 g	-	0,5 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F2 Standard Weights	200 g	-	1,0 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F2 Standard Weights	500 g	-	2,5 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F2 Standard Weights	1 kg	-	5,0 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F2 Standard Weights	2 kg	-	10 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>Weight Standard</b> F2 Standard Weights	5 kg	-	25 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> F2 Standard Weights	10 kg	-	50 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> M1 Standard Weights	1 g	-	0,3 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> M1 Standard Weights	2 g	-	0,4 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> M1 Standard Weights	5 g	-	0,5 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> M1 Standard Weights	10 g	-	0,6 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> M1 Standard Weights	20 g	-	0,8 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> M1 Standard Weights	50 g	-	1,0 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> M1 Standard Weights	100 g	-	1,6 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> M1 Standard Weights	200 g	-	3,0 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> M1 Standard Weights	500 g	-	8,0 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> M1 Standard Weights	1 kg	-	16 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> M1 Standard Weights	2 kg	-	30 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.



## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>Weight Standard</b> M1 Standard Weights	5 kg	-	80 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> M1 Standard Weights	10 kg	-	160 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> M1 Standard Weights	20 kg	-	300 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> M1 Standard Weights	50 kg	-	800 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> Non-Standard Weights	1 g		3,3 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> Non-Standard Weights	2 g		3,3 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> Non-Standard Weights	5 g		3,3 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> Non-Standard Weights	10 g		3,3 g	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> Non-Standard Weights	20 g		3,3 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> Non-Standard Weights	50 g		3,3 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> Non-Standard Weights	100 g		3,3 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.
<b>Weight Standard</b> Non-Standard Weights	200 g		3,4 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Calibration is done in the laboratory.




## TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Accreditation Nr: AB-0092-K  
Revision Nr: 14 Date: 07.06.2024

<b>Weight Standard</b> Non-Standard Weights	500 g		3,5 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. <ul style="list-style-type: none"><li>• Calibration is done in the laboratory.</li></ul>
<b>Weight Standard</b> Non-Standard Weights	1 kg		4,2 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. <ul style="list-style-type: none"><li>• Calibration is done in the laboratory.</li></ul>
<b>Weight Standard</b> Non-Standard Weights	2 kg		60,9 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. <ul style="list-style-type: none"><li>• Calibration is done in the laboratory.</li></ul>
<b>Weight Standard</b> Non-Standard Weights	5 kg		62 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. <ul style="list-style-type: none"><li>• Calibration is done in the laboratory.</li></ul>
<b>Weight Standard</b> Non-Standard Weights	10 kg		143,6 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. <ul style="list-style-type: none"><li>• Calibration is done in the laboratory.</li></ul>
<b>Weight Standard</b> Non-Standard Weights	20 kg		149,6 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. <ul style="list-style-type: none"><li>• Calibration is done in the laboratory.</li></ul>
<b>Weight Standard</b> Non-Standard Weights	50 kg		149,4 mg	Determination of conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. <ul style="list-style-type: none"><li>• Calibration is done in the laboratory.</li></ul>

This document has been signed by Gülden Banu Müderrisoğlu with a secure electronic signature in accordance with the electronic signature law numbered 5070. Use the QR code to verify the e-signed document.


 <p>Calibration TS EN ISO/IEC 17025 AB-0092-K</p>	<p><b>TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ</b></p> <p>Accreditation Nr: AB-0092-K Revision Nr: 14 Date: 07.06.2024</p>
--	---

Calibration and Measurement Capability (CMC)

Weighing Tools

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
<b>Non-automatic Weighing Devices</b> Scales	1 mg < m < 10000 g	With Class E2 mass	$2,2 \cdot 10^{-6}$	<i>m</i> : Weight value (g) Calibration procedure prepared in accordance with the EURAMET/cg-18 document <ul style="list-style-type: none"><li>Where the device is used</li></ul>
<b>Non-automatic Weighing Devices</b> Scales	1 g < m < 50 kg	With Class F1 mass	$6,9 \cdot 10^{-6}$	<i>m</i> : Weight value (g) Calibration procedure prepared in accordance with the EURAMET/cg-18 document <ul style="list-style-type: none"><li>Where the device is used</li></ul>
<b>Non-automatic Weighing Devices</b> Scales	10 kg < m < 1000 kg	With Class M1 mass	$6,9 \cdot 10^{-5}$	<i>m</i> : Weight value (kg) Calibration procedure prepared in accordance with the EURAMET/cg-18 document <ul style="list-style-type: none"><li>Where the device is used</li></ul>

This document has been signed by Gülden Banu Müderrisoğlu with a secure electronic signature in accordance with the electronic signature law numbered 5070. Use the QR code to verify the e-signed document.


 <p>Calibration TS EN ISO/IEC 17025 AB-0092-K</p>	<p><b>TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ</b></p> <p>Accreditation Nr: AB-0092-K Revision Nr: 14 Date: 07.06.2024</p>
--	---

Calibration and Measurement Capability (CMC)

Material Testing Machines

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
Material Testing Machines Tensile / Compression Testing Machine	0,45 kN < F < 200 kN	In the tensile and compression direction with a 0.5 class load cell	% 0,16	F: Applied force (N) Prepared calibration procedure in accordance with TS EN ISO 7500-1 <ul style="list-style-type: none"><li>Customer premises</li><li>Mobile or temporary premises</li></ul>
Material Testing Machines Tensile / Compression Testing Machine	2 kN < F < 200 kN	In the tensile and compression direction with a 0.5 class load cell	% 0,16	F: Applied force (N) Prepared calibration procedure in accordance with TS EN ISO 7500-1 <ul style="list-style-type: none"><li>Customer premises</li><li>Mobile or temporary premises</li></ul>

This document has been signed by Gülден Banu Müderrisoğlu with a secure electronic signature in accordance with the electronic signature law numbered 5070. Use the QR code to verify the e-signed document.


 <p>Calibration TS EN ISO/IEC 17025 AB-0092-K</p>	<p><b>TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ</b></p> <p>Accreditation Nr: AB-0092-K Revision Nr: 14 Date: 07.06.2024</p>
--	---

Calibration and Measurement Capability (CMC)

Torque

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
<b>Torque Measurement Devices</b>  Torque Hand Tools	0,04 N · m < M < 1350 N · m	clockwise and counterclockwise	1.0 %	M : Measured Torque (N.m) Prepared calibration procedure in accordance with TS EN ISO 6789-2 document. <ul style="list-style-type: none"><li>• Customer premises</li><li>• Laboratory</li><li>• Mobile or temporary premises</li></ul>

This document has been signed by Gülden Banu Müderrisoğlu with a secure electronic signature in accordance with the electronic signature law numbered 5070. Use the QR code to verify the e-signed document.

 <p>Calibration TS EN ISO/IEC 17025 AB-0092-K</p>	<p><b>TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ</b></p> <p>Accreditation Nr: AB-0092-K Revision Nr: 14 Date: 07.06.2024</p>
--	---

Calibration and Measurement Capability (CMC)

Optical Quantities

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
<b>Optical Sensitivity</b> Luxmeter	$0 \text{ lx} \leq E_v \leq 5000 \text{ lx}$	2856 K Comparison with reference	1,0 %	$E_v$ : Measured lux Calibration procedure prepared based: ISO/CIE 19476 <ul style="list-style-type: none"><li>• Customer premises</li><li>• Laboratory</li><li>• Mobile or temporary premises</li></ul>
<b>Luminance Responsivity</b> Luminance meter	$120 \text{ cd/m}^2 \leq L_v \leq 1214 \text{ cd/m}^2$	2856 K colour temperature	2,7 %	$L_v$ : Luminance Responsivity Calibration procedure in accordance with: ISO/CIE 19476 <ul style="list-style-type: none"><li>• Customer premises</li><li>• Laboratory</li><li>• Mobile or temporary premises</li></ul>
<b>Responsivity, UV, Broadband irradiance</b> UVA Radiometer	$0,015 \text{ W/m}^2 \leq E_g \leq 100 \text{ W/m}^2$	UV-A range	5,3 %	$E_g$ : Irradiance Responsivity Calibration procedure in accordance with: CIE 220 <ul style="list-style-type: none"><li>• Customer premises</li><li>• Laboratory</li><li>• Mobile or temporary premises</li></ul>

This document has been signed by Gülden Banu Müderrisoğlu with a secure electronic signature in accordance with the electronic signature law numbered 5070. Use the QR code to verify the e-signed document.