

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 Müderr/soğlu with a secure electronic signature in accordance with the electronic signature law numbered 5070. Use the QR code to verify the e-signed document.

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Annex of the Certificate (Page 1/79) Accreditation Scope



TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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 Fax Email Website

: +90 216 585 9800 : +90 216 465 2558 : TTKGKEBISO17025@THY.COM : 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
Signal and Pulse Characteristics Horizontal Deflection (Time) Oscilloscope	4 ns ≤ t < 40 ns	input impedance 50 Ω U ≤ 1 V	2,0 ms/s	t: Applied time interval (s) U:Applied peak-to-peak voltage (V) with Fluke 9500B
Signal and Pulse Characteristics Horizontal Deflection (Time) Oscilloscope	40 ns ≤ <i>t</i> < 400 ns	input impedance 50 Ω U \leq 1 V	2,9 ms/s	t: Applied time interval (s) U:Applied peak-to-peak voltage (V) with Fluke 9500B
Signal and Pulse Characteristics Horizontal Deflection (Time) Oscilloscope	400 ns ≤ <i>t</i> < 4 μs	input impedance 50 Ω U ≤ 1 V	1,4 ms/s	t: Applied time interval (s) U:Applied peak-to-peak voltage (V) with Fluke 9500B
Signal and Pulse Characteristics Horizontal Deflection (Time) Oscilloscope	4 μs ≤ t < 40 μs	input impedance 50 Ω U ≤ 1 V	1,4 ms/s	t: Applied time interval (s) U:Applied peak-to-peak voltage (V) with Fluke 9500B
Signal and Pulse Characteristics Horizontal Deflection (Time) Oscilloscope	40 μs ≤ <i>t</i> < 400 μs	input impedance 50 Ω U ≤ 1 V	4,4 ms/s	t: Applied time interval (s) U:Applied peak-to-peak voltage (V) with Fluke 9500B
Signal and Pulse Characteristics Horizontal Deflection (Time) Oscilloscope	400 μs ≤ t < 4 ms	input impedance 50 Ω U ≤ 1 V	2,3 ms/s	t: Applied time interval (s) U:Applied peak-to-peak voltage (V) with Fluke 9500B
Signal and Pulse Characteristics Horizontal Deflection (Time) Oscilloscope	4 ms ≤ t < 40 ms	input impedance 50 Ω U ≤ 1 V	4,2 ms/s	t: Applied time interval (s) U:Applied peak-to-peak voltage (V) with Fluke 9500B
Signal and Pulse Characteristics Horizontal Deflection (Time) Oscilloscope	40 ms ≤ t < 400 ms	input impedance 50 Ω U≤1 V	1,1 ms/s	t: Applied time interval (s) U:Applied peak-to-peak voltage (V) with Fluke 9500B
Signal and Pulse Characteristics Horizontal Deflection (Time) Oscilloscope	400 ms ≤ t < 1 s	input impedance 50 Ω U≤1 V	1,8 ms/s	t: Applied time interval (s) U:Applied peak-to-peak voltage (V) with Fluke 9500B
Signal and Pulse Characteristics Band width Oscilloscope	10 MHz≤ Δf ≤ 3,2 GHz	U≤3	%2,7 · ∆f	Δf: Measured bandwidth (Hz) U:Applied peak-to-peak voltage (V) with Fluke 9500B

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Website :www.thyteknik.com.tr

			Website : www.thyteknik.com.tr		
Frequency Frequency Meters Frequency Counter	0,1 Hz ≤ <i>f</i> < 10 Hz	Gate Time:10 s U ≤ 12 V Sine Wave	1,0 · 10 ⁻⁵ · f	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	
Frequency Frequency Meters Frequency Counter	0,1 Hz ≤ <i>f</i> < 10 Hz	Gate Time:10 s U ≤ 12 V Square Wave	1,0 · 10 ⁻¹⁰ · f	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	
Frequency Frequency Meters Frequency Counter	10 Hz ≤ f < 100 Hz	Gate Time:10 s U ≤ 12 V Sine Wave	1,8 · 10 ⁻⁷ · f	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	
Frequency Frequency Meters Frequency Counter	10 Hz ≤ f < 100 Hz	Gate Time:10 s U ≤ 12 V Square Wave	1,0 · 10 ⁻¹⁰ · f	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	
Frequency Frequency Meters Frequency Counter	100 Hz ≤ f < 1 kHz	Gate Time:10 s U ≤ 12 V Sine Wave	3,6 · 10 ⁻⁸ · f	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	
Frequency Meters Frequency Counter	100 Hz ≤ <i>f</i> < 1 kHz	Gate Time:10 s U ≤ 12 V Square Wave	1,0 · 10 ⁻¹⁰ · <i>f</i>	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	
Frequency Meters Frequency Counter	1 kHz ≤ f < 10 kHz	Gate Time:10 s U ≤ 12 V Sine Wave	3,6 · 10 ⁻⁹ · f	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	
Frequency Frequency Meters Frequency Counter	1 kHz ≤ f < 10 kHz	Gate Time:10 s U ≤ 12 V Square Wave	1,4 · 10 ⁻¹¹ · f	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	
Frequency Meters Frequency Counter	10 kHz ≤ <i>f</i> < 100 kHz	Gate Time:10 s U ≤ 12 V Sine Wave	3,6 · 10 ⁻¹⁰ · <i>f</i>	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	
Frequency Meters Frequency Counter	10 kHz ≤ <i>f</i> < 100 kHz	Gate Time:10 s U ≤ 12 V Square Wave	1,4 · 10 ⁻¹¹ · f	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	
Frequency Frequency Meters Frequency Counter	100 kHz ≤ <i>f</i> < 20 GHz	Gate Time:10 s <i>U</i> ≤ 12 V	1,4 · 10 ⁻¹¹ · f	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	

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TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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

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			Email : 1 TRGREBISO 1 7025(a) THY.COM Website : www.thyteknik.com.tr		
Frequency Sources Frequency Generator	0,1 Hz ≤ f < 10 Hz	Gate Time:10 s U ≤ 12 V Sine Wave	1,0 · 10 ⁻⁵ · f	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	
Frequency Frequency Sources Frequency Generator	0,1 Hz ≤ <i>f</i> < 10 Hz	Gate Time:10 s U ≤ 12 V Square Wave	1,0 · 10 ⁻¹⁰ · f	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	
Frequency Sources Frequency Generator	10 Hz ≤ f < 100 Hz	Gate Time:10 s <i>U</i> ≤ 12 V Sine Wave	1,8 · 10 ⁻⁷ · f	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	
Frequency Sources Frequency Generator	10 Hz ≤ f < 100 Hz	Gate Time:10 s U ≤ 12 V Square Wave	1,0 · 10 ⁻¹⁰ · f	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	
Frequency Sources Frequency Generator	100 Hz ≤ <i>f</i> < 1 kHz	Gate Time:10 s U ≤ 12 V Sine Wave	3,6 · 10 ⁻⁸ · f	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	
Frequency Sources Frequency Generator	100 Hz ≤ <i>f</i> < 1 kHz	Gate Time:10 s U ≤ 12 V Square Wave	1,0 · 10 ⁻¹⁰ · f	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	
Frequency Sources Frequency Generator	1 kHz ≤ f < 10 kHz	Gate Time:10 s U ≤ 12 V Sine Wave	3,6 · 10 ⁻⁹ · f	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	
Frequency Sources Frequency Generator	1 kHz ≤ f < 10 kHz	Gate Time:10 s U ≤ 12 V Square Wave	1,4 · 10 ⁻¹¹ · f	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	
Frequency Sources Frequency Generator	10 kHz ≤ f < 100 kHz	Gate Time:10 s U ≤ 12 V Sine Wave	3,6 · 10 ⁻¹⁰ · f	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	
Frequency Sources Frequency Generator	10 kHz ≤ f < 100 kHz	Gate Time:10 s U ≤ 12 V Square Wave	1,4 · 10 ⁻¹¹ · f	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	
Frequency Sources Frequency Generator	100 kHz ≤ f ≤ 20 GHz	Gate Time:10 s <i>U</i> ≤ 12 V	1,4 · 10 ⁻¹¹ · f	f: Measured frequency (Hz) U: Amplitude of the applied signal (V) GPS Rectified	

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TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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Email :TKGKEBIS017025@THY.COM

			Website : www.thyteknik.com.tr			
Time Range 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		
Time Range 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		
Time Range Interval Meters Time Difference Meter (Frequency Counter, Stopwatch, Timer)	1 s ≤ t ≤ 3600 s	-	0,057 s	on-site calibrations with stopwatch		
Frequency Frequency Meters Tachometer	60 rpm ≤ ω ≤ 99900 rpm	0,01 rpm ≤ <i>r</i> ≤ 1 rpm	5,7 . 10 ⁻⁶ . 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.

Annex of the Certificate (Page 5/79) Accreditation Scope



TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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

Calibration and Measurement Capability (CMC)

Temperature

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
			Oncertainty (K=2)	
Temperature Meters With Indicator	-40 °C ≤ <i>T</i> ≤ 70 °C	Climate Chamber	0,58 °C	Comparative Calibration Method (Ice Point uncertanity is included)
Resistance				T: Measured Temperature
	05.00 - 150.05	1: :15 :1	0.05.00	
Temperature Meters With Indicator	-25 °C < T < 150 °C	Liquid Bath	0,05 °C	Comparative Calibration Method (Ice Point uncertanity is included)
Resistance				T: Measured Temperature
Temperature Meters With	-95 °C < T < 140 °C	Block Calibrator	0,03 °C	Comparative Calibration Method
Indicator				(Ice Point uncertanity is included) T: Measured Temperature
Resistance				T. Medodred Temperature
Temperature Meters With	140 °C < T < 650 °C	Block Calibrator	0,1 °C	Comparative Calibration Method
Indicator				(Ice Point uncertanity is included) T: Measured Temperature
Resistance				
Temperature Meters With Indicator	-95 °C < T < 140 °C	Block Calibrator	0,08 °C	Comparative Calibration Method (Ice Point uncertainty is included)
Thermocouple Sensor				T: Measured Temperature
	140.00 . T . (50.00	Dla els Calibrata	0.21 *0	Companyative California Adams
Temperature Meters With Indicator	140 °C < T < 650 °C	Block Calibrator	0,31 °C	Comparative Calibration Method (Ice Point uncertainty is included)
Thermocouple Sensor				T: Measured Temperature
Temperature Meters With	-40 °C < T < 70 °C	Climate Chamber	0,58 °C	Comparative Calibration Method
Indicator				(Ice Point uncertanity is included) T: Measured Temperature
Thermocouple Sensor				
Temperature Meters With Indicator	-25 °C < T < 260 °C	Liquid Bath	0,12 °C	Comparative Calibration Method
Thermocouple Sensor				(Ice Point uncertanity is included) T: Measured Temperature
mermocoupie Sensoi				
Temperature Meters With Indicator	650 °C < T < 950 °C	Block Calibrator	1,6 °C	Comparative Calibration Method (Ice Point uncertanity is included)
Thermocouple Sensor				T: Measured Temperature
Temperature Meters With	950 °C < T < 1100	Block Calibrator	2,1 °C	Comparative Calibration Method
Indicator	°C	Block GuilbratOl	2,1 0	(Ice Point uncertanity is included)
Thermocouple Sensor				T: Measured Temperature
Standard Platinum Resistance	-25 °C ≤ T ≤ 260 °C	Liquid Baths	0,05 °C	Comparative Calibration Method
Thermometers				(Ice Point uncertanity is included) T: Measured Temperature
Platinium Resistive Thermometer (PRT)				
Standard Platinum Resistance	-95 °C ≤ <i>T</i> ≤ 140 °C	Block Calibrator	0,03 °C	Comparative Calibration Method
Thermometers			-,	(Ice Point uncertanity is included) T: Measured Temperature
Platinium Resistive Thermometer (PRT)				1. Measured Telliperature

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

Annex of the Certificate (Page 7/79) Accreditation Scope

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TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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Temperature Indicators		-250 °C < T < 400 °C	T type	0,15 °C	
	Temperature Indicators				
Cold Junction OFF	Cold Junction OFF				

Annex of the Certificate (Page 8/79) Accreditation Scope



TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Temperature indicators and Calibrators Cod Junction OFF Cod Internation Cod Junction OFF Cod Junct					
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Calibrators °C EURAMET/cg-11 Temperature Indicators	Cold Junction ON				
			J type	0,19 °C	
Cold Junction ON	Temperature Indicators				
	Cold Junction ON				

Annex of the Certificate (Page 9/79) Accreditation Scope



TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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

Annex of the Certificate (Page 10/79) Accreditation Scope

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

TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Temperature Indicators and Calibrators	0 °C < T < 1767 °C	R type	0,47 °C	T: Meaured Temperature EURAMET/cg-11
Temperature Indicators				
Cold Junction OFF				
Temperature Indicators and Calibrators	-200 °C < T < 1300 °C	N type	0,16 °C	T: Meaured Temperature EURAMET/cg-11
Temperature Indicators				
Cold Junction OFF				
Temperature Indicators and Calibrators	-200 °C < T < 800 °C	-	0,16 °C	T: Meaured Temperature EURAMET/cg-11
Temperature Indicators				
Sıcaklık Kalibratörü RTD (PT 100 vb.)				
Industrial Radiation Thermometers	-25 °C < T < 100 °C	With Bath	0,6 °C	Calibration Procedure prepared according to BS EN 12470-5 VDI VDE DGQ 3511
Pyrometer Thermal camera IR Thermometer				ASTM E 2847 7: Ölçülen Sıcaklık [°C]
Industrial Radiation Thermometers	50 °C < T < 300 °C	With IR Calibrator	1,8 °C	Calibration Procedure prepared according to BS EN 12470-5 VDI VDE DGQ 3511
Pyrometer Thermal camera IR Thermometer				ASTM E 2847 7: Ölçülen Sıcaklık [°C]
Industrial Radiation Thermometers	300 °C < T < 500 °C	With IR Calibrator	2,8 °C	Calibration Procedure prepared according to BS EN 12470-5
Pyrometer Thermal camera IR Thermometer				VDI VDE DGQ 3511 ASTM E 2847 7: Ölçülen Sıcaklık [°C]
Industrial Radiation Thermometers	500 °C < T < 650 °C	With IR Calibrator	3,8 °C	Calibration Procedure prepared according to BS EN 12470-5
Pyrometer Thermal camera IR Thermometer				VDI VDE DGQ 3511 ASTM E 2847 T: Ölçülen Sıcaklık [°C]
Industrial Radiation Thermometers	34 °C < T < 42 °C	With Bath	0,15 °C	Calibration Procedure prepared according to BS EN 12470-5
IR Ear Thermometer				VDI VDE DGQ 3511 ASTM E 2847 7: Ölçülen Sıcaklık [°C]
Hygrometers	30 % rh ≤ <i>RH</i> ≤ 95 % rh	In Humidity and Temperature Chamber 15 °C $\leq T \leq$ 30 °C	2 % rh	Comparative Calibration Method RH: Measured Relative Humidity T: Measured Temperature
Hygrometer Relative Humidity Meter (Datalogger) Relative Humidity Meter (Digital/Analog)				

Annex of the Certificate (Page 11/79) Accreditation Scope



TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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

Controlled Volumes (Relative Humidity Distribution) Climate Chamber Relative Humidity Source Sterilizer (Autoclave)	30 % rh ≤ <i>RH</i> ≤ 60 % rh	Central Relative Humidity Measurement (Single Point) 21 °C ≤ T ≤ 25 °C	1,6 % rh	RH: Measured Humidity T: Measured Temperature Dakks DKD-R 5-7, Eurametcg-20, EN 60068-3-5, EN 60068-3-6, EN 60068-3-11
Controlled Volumes (Relative Humidity Distribution) Climate Chamber Relative Humidity Source Sterilizer (Autoclave)	60 % rh ≤ <i>RH</i> ≤ 95 % rh	Central Relative Humidity Measurement (Single Point) 21 °C ≤ T ≤ 25 °C	2,5 % rh	RH: Measured Humidity T: Measured Temperature 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.

Annex of the Certificate (Page 12/79) Accreditation Scope



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
Dimension Standards	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
Gauge Block (short 0.5 mm - 100 mm)				L : Measured value
				Calibration is done in the laboratory.
Dimension Standards	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
Long Gauge Block (Length Bar) (125 mm-1000 mm)				L : Measured value
,				Calibration is done in the laboratory.
Handheld Basic Measuring Devices	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
Dial Indicator (Comparator)				r: Resolution
				L: Measured Length [m]
				Calibration is done in the laboratory.
Handheld Basic Measuring Devices	0 mm < L ≤ 3 mm	r: 0,001 mm	1 μm	Procedure according to VDI/VDE/DGQ 2618 Ch. part 11.2 document
Precision Comparator				r: Resolution
				L: Measured Length [m]
				Calibration is done in the laboratory.
Handheld Basic Measuring Devices	0 mm < L ≤ 2 mm	r: 0,001 mm	1 μm	Procedure according to VDI/VDE/DGQ 2618 Ch. part 11.3 document
Secretion Comparator (Precision Examiner)				r: Resolution
				L: Measured Length [m]
				Calibration is done in the laboratory.
Handheld Basic Measuring Devices	0 mm < L ≤ 50 mm	r: 0,001 mm	(1 + 10 · L) μm	Comparison with Gauge Blocks
				r: Resolution
Thickness Meter (Thickness Comparator)				L: Measured Length [m]
				Calibration is done in the laboratory.

Annex of the Certificate (Page 13/79) Accreditation Scope

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TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Handheld Basic Measuring Devices	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
Thickness Meter (Thickness Comparator)				r: Resolution
				L: Measured Length [m]
				Calibration is done in the laboratory.
Handheld Basic Measuring Devices	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
Thickness Meter (Thickness Comparator)				r: Resolution
				L: Measured Length [m]
				Calibration is done in the laboratory.
Handheld Basic Measuring Devices	0 mm < L ≤ 500 mm	Internal and External Measurements, Depth and Step Measurement	(7 + 13 · L) μm	Procedure according to VDI/VDE/DGQ 2618 Part 9.1 Documents
Caliper (External diameter, Internal diameter, Depth, Step measurements)		r: 0,01 mm		r: Resolution
Jopan, Josephine and Miles				L: Measured Length [m]
				Calibration is done in the laboratory.
Handheld Basic Measuring Devices	500 mm < L ≤ 2000 mm	Internal and External Measurements, Depth and Step Measurement	(10 + 20 · L) μm	Procedure according to VDI/VDE/DGQ 2618 Part 9.1 Documents
Caliper (External diameter, Internal diameter, Depth, Step measurements)		r: 0,01 mm		r: Resolution
				L: Measured Length [m]
				Calibration is done in the laboratory.
Handheld Basic Measuring Devices	0 mm < L ≤ 500 mm	r: 0,01 mm	(13 + 5 · L) μm	Procedure according to VDI/VDE/DGQ 2618 Part 9.2 Documents
Depth Caliper				r: Resolution
				L: Measured Length [m]
				Calibration is done in the laboratory.
Handheld Basic Measuring Devices	500 mm < L ≤ 1000 mm	r: 0,01 mm	(11 + 9 · L) μm	Procedure according to VDI/VDE/DGQ 2618 Part 9.2 Documents
Depth Caliper				r: Resolution
				L: Measured Length [m]
				Calibration is done in the laboratory.
Handheld Basic Measuring Devices	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
Height Measuring Device (Height Gauge)				r: Resolution
				L: Measured Length [m]
				Calibration is done in the laboratory.

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

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Handheld Basic Measuring Devices	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
Outer Diameter Micrometry				r: Resolution
				L: Measured Length [m]
				Calibration is done in the laboratory.
Handheld Basic Measuring Devices	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
Outer Diameter Micrometry				r: Resolution
				L: Measured Length [m]
				Calibration is done in the laboratory.
Handheld Basic Measuring Devices	0 mm < L ≤ 500 mm	r: 0.001 mm	1 μm	Procedure according to VDI/VDE/DGQ 2618 Part 10.3 Documents
Passometer Scale				r: Resolution
				L: Measured Length [m]
				Calibration is done in the laboratory.
Handheld Basic Measuring Devices	500 mm < L ≤ 1500 mm	r: 0.002 mm	1,5 μm	Procedure according to VDI/VDE/DGQ 2618 Part 10.3 Documents
Passometer Scale				r: Resolution
				L: Measured Length [m]
				Calibration is done in the laboratory.
Handheld Basic Measuring Devices	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
Depth Micrometry				r: Resolution
				L: Measured Length [m]
				Calibration is done in the laboratory.
Handheld Basic Measuring Devices	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
Two-Point Inner Diameter Micrometry				r: Resolution
				L: Measured Length [m]
				Calibration is done in the laboratory.
Handheld Basic Measuring Devices	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
Three-Point Inner Diameter Micrometry				r: Resolution
				L: Measured Length [m]
				Calibration is done in the laboratory.

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

TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Micrometer Setting Bar [Flat, Screw] Diameter Standards 0.2 mm = D = 100 mm Exterior Cylinder (Sumper Master (Ref. Pass - not picks of the Standards) Diameter Standards 1 mm = D = 305 mm Calibration is done in the laboratory. Diameter Standards 1 mm = D = 305 mm Calibration is done in the laboratory. Diameter Standards 1 mm = D = 305 mm Calibration is done in the laboratory. Procedure according to VolVMPD (DQ 2618 Part 4.1) Doumeter Standards 1 mm = D = 305 mm Calibration is done in the laboratory. Procedure according to VolVMPD (DQ 2618 Part 4.1) Doumeter (Ring Master (Ref. Passeernot piass etc.)) Procedure according to VolVMPD (DQ 2618 Part 4.1) Doumeter Standards Snap Gauge (Inner , Outer) Diameter Standards 1 mm = D = 20 mm Steel Calibration is done in the laboratory. Procedure according to VolVMPD (DQ 2618 Part 4.2) Doumeter Standards Outer Screw Thread Steel Outer Screw Thread Steel Calibration is done in the laboratory. Procedure according to VolVMPD (DQ 2618 Part 4.2) Doumeter Ind Calibration is done in the laboratory. Procedure according to VolVMPD (DQ 2618 Part 4.2) Doumeter Ind Calibration is done in the laboratory. Screw Standards Outer Screw Thread Step: Outer Screw Thread Outer Screw Thread Outer Screw Thread Outer Screw Thread Outer Screw Thread Outer Screw Thread Outer Screw Thread Outer Screw Thread Outer Screw Thread Outer Screw Thread Outer Screw Thread Outer Screw Thread Outer Screw Thread Outer Screw Thread Outer Screw Thread Ou	Dimension Standards	25 mm < L ≤ 590 mm	-	(0,8 + 3,3 · L) μm	Procedure according to VDI/VDE/DGQ 2618 Part 4.4 Documents
Diameter Standards O2.mm ≤D≤100 mm Seterior Cylinder (Bumper Mastar (Ref, Pass-not pass, etc.) Piston, Pin (Serew Measuring Pins) Diameter Standards Diameter Standards I mm ≤D≤305 mm Internal Cylinder (Ring Mastar (Ref, Pass-enot pass, etc.)) Diameter Standards I mm ≤D≤305 mm Internal Cylinder (Ring Mastar (Ref, Pass-enot pass, etc.)) Diameter Standards I mm ≤D≤305 mm Internal Cylinder (Ring Mastar (Ref, Pass-enot pass, etc.)) Diameter Standards I mm ≤D≤305 mm Internal Cylinder (Ring Mastar (Ref, Pass-enot pass, etc.)) Diameter Standards Smm <l≤150 (0.8="" (m)="" +="" -="" 0.0="" 0.<="" 0.mm="" 2="" 2518="" 4.2="" 4.7="" 6="" according="" calibration="" control="" d:="" dgq="" diameter="" done="" flat="" gauge="" i="" in="" is="" laboratory.="" measured="" mine="" mm="" no="" nogo="" o1.mm="" o2.mm="" o3.mm="" o4.mm="" o5.mm="" o6.mm="" obcuments="" part="" procedure="" ring="" screw="" standards="" steel="" td="" the="" thread="" to="" ve="" voll="" ·="" μm="" ≤d≤100="" ≤d≤20=""><td>Micrometer Setting Bar [Flat, Screw]</td><td></td><td></td><td></td><td>r: Resolution</td></l≤150>	Micrometer Setting Bar [Flat, Screw]				r: Resolution
Diameter Standards 0.2 mm ≤ D ≤ 100 mm Calibration is done in the laboratory.					L: Measured Length [m]
Exterior Cylinder (Bumper Mastar (Ref. Passe not pass, etc.) Piston, Pin (Screw Measuring Pins)					Calibration is done in the laboratory.
Exterior Cylinder (Bumper Mastar (Ref. Pass=not pass, etc.) Piston, Pin (Screw Measuring Pins) Diameter Standards 1 mm ≤ p ≤ 305 mm - (1,1 + 20 - D) μm Procedure according to VDI/VDE/DQQ 2618 Part 4.1 Documents D: Diameter [m] Calibration is done in the laboratory. Handheld Basic Measuring Devices 5 mm < L ≤ 150 mm - (1 + 5 · L) μm Procedure according to VDI/VDE/DQQ 2618 Part 4.7 Documents L: Measured Length [m] Calibration is done in the laboratory. Diameter Standards 0.1 mm ≤ D ≤ 20 mm Steel 0.3 mm ≤ D ≤ 100 mm Steel 0.4 50 μm 0.4 50 μm 0.5 Diameter [m] Calibration is done in the laboratory. Steel 0.6 Jimm ≤ D ≤ 100 mm Steel 0.7 Jimm ≤ D ≤ 100 mm Steel 0.8 + 2 · D) μm Procedure according to VDI/VDE/DQQ 2618 Part 4.7 Documents D: Diameter [m] Calibration is done in the laboratory. Steel 0.9 Jimm ≤ D ≤ 100 mm Jimm ≤ D ≤ 100 mm Steel 0.9 Jimm ≤ Mm ≤ Mm ≤ Mm ≤ Mm ≤ Mm ≤ Mm ≤ Mm ≤	Diameter Standards		-	(1,1 + 15 · D) μm	VDI/VDE/DGQ 2618 Part 4.1
Diameter Standards Internal Cylinder (Ring Mastar (Ref, Passes-not passe etc.)) Handheld Basic Measuring Devices Smm < L ≤ 150 mm Snap Gauge (Inner , Outer) Diameter Standards Other Standards Other Standards Other Standards Other Screw Thread Time ≤ D ≤ 100 mm Step: Other Screw Plug Gauge Inner Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D ≤ 100 mm Step: Other Screw Thread Smm < D	Exterior Cylinder (Bumper Mastar (Ref, Pass- not				D: Diameter [m]
Internal Cylinder (Ring Mastar (Ref, Passes-not pass etc.) Documents	pass, etc.) Piston, Pin (Screw Measuring Pins) Wire, Setting Gauge)				Calibration is done in the laboratory.
Internal Cylinder (Ring Mastar (Ref, Passes-not pass etc.)	Diameter Standards	1 mm <u>< D ≤</u> 305 mm	-	(1,1 + 20 · D) μm	VDI/VDE/DGQ 2618 Part 4.1
Handheld Basic Measuring Devices 5 mm < L ≤ 150 mm	Internal Cylinder (Ring Mastar (Ref. Passes-not				D: Diameter [m]
Screw Standards Flat Screw Plug Gauge Steel Steel (0,8 + 2 · D) µm Procedure according to VDI/VDE/DGQ 2618 Boilim 4.8, ISO 228, BS 919, ISO 1502, ANSI/ASME B1.1, B1.2 Documents Screw Standards Inner Screw Thread 5 mm ≤ D ≤ 100 mm Step: 0,35 mm - 6 mm Step:	pass etc.))				Calibration is done in the laboratory.
Diameter Standards Gauge Pin and Screw Thread Calibration is done in the laboratory. Screw Standards Flat Screw Plug Gauge Inner Screw Thread Inner Screw Thread Step: 0,35 mm - 6 mm Step: 0,35 mm - 6 mm Step: 0,35 mm - 6 mm Step: 0,35 mm - 6 mm Step: 0,35 mm - 6 mm Step: 0,35 mm - 6 mm Step: 0,35 mm - 6 mm Step: 0,35 mm - 6 mm Step: 0,35 mm - 6 mm Step: 0,35 mm - 6 mm Step: 0,35 mm - 6 mm Step: 0,35 mm - 6 mm Step: 0,35 mm - 6 mm Step: 0,35 mm - 6 mm Step: 0,35 mm - 6 mm Step: 0,35 mm - 6 mm Step: 0,36 pm Procedure according to VDI/VDE/DGQ 2618 Böllim 4.8, ISO 228, Bs 919, ISO 1502, ANSI/ASME B1.1, B1.2 Documents Go - NoGo Control D: Measured Part Diameter [m] Calibration is done in the laboratory. Screw Standards Flat Screw Ring Gauge	Handheld Basic Measuring Devices	5 mm < L ≤ 150 mm	-	(1 + 5 · L) μm	VDI/VDE/DGQ 2618 Part 4.7
Diameter Standards Gauge Pin and Screw Thread Calibration is done in the laboratory. Screw Standards Flat Screw Plug Gauge Flat Screw Ring Gauge Inner Screw Thread Step: 0.35 mm - 6 mm Step: 0.35 mm - 6 mm Step: 0.35 mm - 6 mm Step: 0.35 mm - 6 mm Step: 0.35 mm - 6 mm Step: 0.35 mm - 6 mm Step: 0.35 mm - 6 mm Step: 0.35 mm - 6 mm Step: 0.35 mm - 6 mm D: Measured Part Diameter [m] Calibration is done in the laboratory. Screw Standards Flat Screw Ring Gauge Step: 0.35 mm - 6 mm Step: 0.35 mm - 6 mm Step: 0.35 mm - 6 mm Step: 0.35 mm - 6 mm Step: 0.35 mm - 6 mm 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 VDI/VDE/DGQ 2618 Bölüm 4.8, ISO 228, BS 919, ISO 1502, ANSI/ASME B1.1, B1.2 Documents Go - NoGo Control D: Measured Part Diameter [m]	Snap Gauge (Inner , Outer)				L: Measured Length [m]
Gauge Pin and Screw Thread					Calibration is done in the laboratory.
Gauge Pin and Screw Thread Calibration is done in the laboratory. Screw Standards Outer Screw Thread 1 mm ≤ D ≤ 100 mm Step: 0,35 mm - 6 mm 4,50 μm Procedure according to VDI/VDE/DGQ 2618 B6lüm 4.8, ISO 228, BS 919, ISO 1502, ANSI/ASME B1.1, B1.2 Documents Flat Screw Plug Gauge Go - NoGo Control D: Measured Part Diameter [m] Calibration is done in the laboratory. Screw Standards Inner Screw Thread 5 mm ≤ D ≤ 100 mm Step: 0,35 mm - 6 mm Procedure according to VDI/VDE/DGQ 2618 B6lüm 4.8, ISO 228, BS 919, ISO 1502, ANSI/ASME B1.1, B1.2 Documents Flat Screw Ring Gauge Go - NoGo Control D: Measured Part Diameter [m]	Diameter Standards		Steel	(0,8 + 2 · D) μm	VDI/VDE/DGQ 2618 Part 4.2
Screw Standards Flat Screw Plug Gauge Step: 0,35 mm - 6 mm 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 D: Measured Part Diameter [m] Calibration is done in the laboratory. Screw Standards	Gauge Pin and Screw Thread				D: Diameter [m]
1 mm ≤ D ≤ 100 mm 0,35 mm - 6 mm VDI/VDE/DGQ 2618 Bölüm 4.8, ISO 228, BS 919, ISO 1502, ANSI/ASME B1.1, B1.2 Documents Go - NoGo Control D: Measured Part Diameter [m] Calibration is done in the laboratory. Screw Standards					Calibration is done in the laboratory.
Go - NoGo Control D: Measured Part Diameter [m] Calibration is done in the laboratory. Screw Standards Inner Screw Thread 5 mm ≤ D ≤ 100 mm Flat Screw Ring Gauge 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 D: Measured Part Diameter [m]				4,50 μm	VDI/VDE/DGQ 2618 Bölüm 4.8, ISO 228, BS 919, ISO 1502, ANSI/ASME
Screw Standards Inner Screw Thread 5 mm ≤ D ≤ 100 mm Flat Screw Ring Gauge 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 D: Measured Part Diameter [m]	. lat colon ring cauge				Go - NoGo Control
Screw Standards 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 Flat Screw Ring Gauge Go - NoGo Control D: Measured Part Diameter [m]					D: Measured Part Diameter [m]
5 mm ≤ D ≤ 100 mm 0,35 mm - 6 mm VDI/VDE/DGQ 2618 Bölüm 4.8, ISO 228, BS 919, ISO 1502, ANSI/ASME B1.1, B1.2 Documents Go - NoGo Control D: Measured Part Diameter [m]					Calibration is done in the laboratory.
Go - NoGo Control D: Measured Part Diameter [m]				3,65 μm	VDI/VDE/DGQ 2618 Bölüm 4.8, ISO 228, BS 919, ISO 1502, ANSI/ASME
					Go - NoGo Control
Calibration is done in the laboratory.					D: Measured Part Diameter [m]
					Calibration is done in the laboratory.

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

TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Angle Measuring Devices	a ≤ 360°	Measurement Arm	1'	Procedure according to
		Until 300 mm		VDI/VDE/DGQ 2618 Part 7.2 Documents
(Bevel) Protractor				α: Açı
				L: Measured Length [m]
				Calibration is done in the laboratory.
Handheld Basic Measuring Devices	1 mm < L ≤ 25 mm	-	14,5 μm	Optical Measurement Method
				r: Radius
Radius Gauges				Calibration is done in the laboratory.
Dimension Standards	0,03 mm < L ≤ 2 mm	-	0,5 μm	Procedure according to DIN 2275 Documents
Thickness gauge (Synthyl etc.(Feeler Gauge))				L: Thickness
				Calibration is done in the laboratory.
Handheld Basic Measuring Devices	0 mm < L ≤ 500 mm	-	(14 + 5 · L) μm	Optical Measurement Method
Steel Ruler				Comparison Method with Reference Ruler
				Procedure according to DIN 865, DIN 866 Documents
				L: Length
				Calibration is done in the laboratory.
Handheld Basic Measuring Devices	0 mm < L ≤ 3000 mm	-	(93 + 18 · L) μm	Optical Measurement Method
Steel Ruler	111111			Comparison Method with Reference Ruler
				Procedure according to DIN 865, DIN 866 Documents
				L: Length
				Calibration is done in the laboratory.
Dimension Standards	0 mm < L ≤ 50 m	-	(82 + 18 · L) μm	Procedure according to TS 9505 Documents
Type Meter				L: Length
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				Calibration is done in the laboratory.
Reference Materials	20 μm ≤ <i>L</i> ≤ 125 mm	Mesh Range	13 μm	Procedure according to ISO 3310 Documents
[Sieve, Mesh] Aperture (Aperture)				L: Measured Mesh Gap Value
				Calibration is done in the laboratory.
Coating Thickness	7 μm ≤ <i>L</i> ≤ 8000 μm	-	0,7 μm	DIN EN ISO 2178
				L: Thickness
Coating Thickness Standard (Thickness Foils)				Calibration is done in the laboratory.

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

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

Length Measuring Devices 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.
Length Measuring Devices 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.
Length Measuring Devices 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.

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TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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

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
Radio Frequency (RF) Power	0,001 mW ≤ P ≤ 100 mW	100 kHz ≤ <i>f</i> < 4,2 GHz	% 6,64 · P	P : Power
Absolute RF Power	(-30 dBm·≤ P ≤ + 20 dBm)			Using 8482A Power Sensor and 4418A Power Meter
RF Power Source				
Reference Power Output of RF Power Meters Signal Source				In the laboratory
0.9.10.000.00				calibration is done.

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Annex of the Certificate (Page 20/79) Accreditation Scope



TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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

Calibration and Measurement Capability (CMC)

Pressure

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
Analog Manometer Digital Manometer Pressure Transducer	3 kPA ≤ p ≤ 3,5 MPa	Pneumatic (with DWT)	1,6 · 10 ⁻⁴ p + 72 Pa	Calibration procedure prepared in accordance with EURAMET/CG-17 Guidance Document p: Measured value (Pa)
Analog Manometer Digital Manometer Pressure Transducer	0,1 MPa ≤ <i>p</i> ≤ 3,5 MPa	Hydraulic (with DWT)	1,7 · 10 ⁻⁴ p + 60 Pa	Calibration procedure prepared in accordance with EURAMET/CG-17 Guidance Document p: Measured value (Pa)
Analog Manometer Digital Manometer Pressure Transducer	3,5 MPa ≤ <i>p</i> ≤ 70 MPa	Hydraulic (with DWT)	1,8 · 10 ⁻⁴ · <i>p</i> + 0,47 kPa	Calibration procedure prepared in accordance with EURAMET/CG-17 Guidance Document p: Measured value (Pa)
Analog Manometer Digital Manometer Pressure Transducer	-90 kPa ≤ <i>p</i> ≤ -10 kPa	Pneumatic (with DWT)	6 Pa + 1,4 · 10 ⁻⁴ · 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.
Analog Manometer Digital Manometer Pressure Transducer	10 kPa ≤ p ≤ 350 kPa	Pneumatic (with RPM4)	4,3 · 10 ^{-s} · <i>p</i> + 0,13 kPa	Calibration procedure prepared in accordance with EURAMET/CG-17 Guidance Document • p: Measured value (Pa)
Absolute Pressure Air Data Test Set (ADTS)	2,5 kPa ≤ p ≤ 350 kPa	Pneumatic (with RPM4)	7 · 10 ^{-s} · <i>p</i> + 20 Pa	Calibration procedure prepared in accordance with EURAMET/CG-17 Guidance Document • p: Measured value (Pa)

Annex of the Certificate (Page 21/79) Accreditation Scope



TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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

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

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Annex of the Certificate (Page 22/79) Accreditation Scope



TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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

Calibration and Measurement Capability (CMC)

Force

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
Force Measurement Devices Load Cell Force Converter Dynamometer Crane Scale	0,45 kN ≤ <i>F</i> ≤ 200 kN	Tension and Compression with 00 Class Loadcell	0,08 %	F: Applied force (N) DAkkS-DKD-R 3-3 Procedure according to EN ISO 376 standards. A hydraulic force standard machine with a reference force transducer is used. Calibration is done in the laboratory.
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## • Customer premises • Laboratory • Mobile or temporary premises
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## • Customer premises • Laboratory • Mobile or temporary premises
Force Measurement Devices Hand Scale	0,5 N ≤ <i>F</i> ≤ 500 N	Tensile/Compression with Dead Weight	0,1 %	F: Applied force (N) Calibration procedure prepared in accordance with DKD R 3-3 Guidance Document Calibration is done in the laboratory.

Annex of the Certificate (Page 23/79) Accreditation Scope



TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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

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##

- · Customer premises
- LaboratoryMobile or te Mobile or temporary premises

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Annex of the Certificate (Page 24/79) Accreditation Scope



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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
DC Voltage DC Voltage Meters	0 mV ≤ <i>U</i> < 200 mV	-	9,0 · 10 ⁻⁶ · <i>U</i> + 0,5 μV	U: Measured voltage, V Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: DC Voltage DC Voltmeter				In customer place In the laboratory calibration is made.
DC Voltage DC Voltage Meters Multimeter: DC Voltage DC Voltmeter	200 mV ≤ U < 2 V	-	6,0 · 10 ⁻⁶ · <i>U</i> + 1,0 μV	U: Measured voltage, V Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.
DC Voltage DC Voltage Meters Multimeter: DC Voltage DC Voltmeter	2 V ≤ <i>U</i> ≤ 11 V	-	4,0 · 10 ⁻⁶ · <i>U</i> + 5,0 μV	U: Measured voltage, V Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.
DC Voltage DC Voltage Meters Multimeter: DC Voltage DC Voltmeter	11 V < U ≤ 20 V	-	4,0 · 10 ⁻⁶ · <i>U</i> + 0,6 μV	U: Measured voltage, V Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.
DC Voltage DC Voltage Meters Multimeter: DC Voltage DC Voltmeter	20 V < U ≤ 200 V	-	7,0 · 10 ^{·6} · <i>U</i> + 40 μV	U: Measured voltage, V Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.

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DC Voltage DC Voltage Meters Multimeter: DC Voltage DC Voltmeter	200 V < <i>U</i> ≤ 1000 V	-	9,0 · 10 ⁻⁶ · <i>U</i> + 0,6 mV	U: Measured voltage, V Direct Comparison Method with FLUKE 5720A Calibrator
				In customer placeIn the laboratorycalibration is made.
DC Voltage	0 mV ≤ <i>U</i> < 199,99 mV	-	6,9 · 10 ⁻⁶ · <i>U</i> + 0,10 μV	<i>U</i> : Measured voltage, V
DC Voltage Sources				Direct Comparison Method to Fluke 8508A Reference Multimeter
DC Voltage Source Calibrator: DC Voltage				In customer place In the laboratory
				calibration is made.
DC Voltage	199,99 mV ≤ <i>U</i> ≤ 1,9999 V	-	3,7 · 10 ⁻⁶ · <i>U</i> + 0,39 μV	U: Measured voltage, V
DC Voltage Sources				Direct Comparison Method to Fluke 8508A Reference Multimeter
DC Voltage Source Calibrator: DC Voltage				In customer place In the laboratory
				calibration is made.
DC Voltage	1,9999 V < <i>U</i> ≤ 19,999 V	-	4,0 · 10 ⁻⁶ · <i>U</i> + 0,35 μV	U: Measured voltage, V
DC Voltage Sources	15,555 V			Direct Comparison Method to Fluke 8508A Reference Multimeter
DC Voltage Source Calibrator: DC Voltage				In customer place In the laboratory
				calibration is made.
DC Voltage	19,999 V < <i>U</i> ≤ 199,99 V	-	6,2 · 10 ⁻⁶ · <i>U</i> + 45 μV	U: Measured voltage, V
DC Voltage Sources	,			Direct Comparison Method to Fluke 8508A Reference Multimeter
DC Voltage Source Calibrator: DC Voltage				In customer place In the laboratory
				calibration is made.
DC Voltage	199,99 V < <i>U</i> ≤ 1000	-	6,5 · 10 ⁻⁶ · U + 0,1 mV	U: Measured voltage, V
DC Voltage Sources	V			Direct Comparison Method to Fluke 8508A Reference Multimeter
DC Voltage Source Calibrator: DC Voltage				In customer placeIn the laboratorycalibration is made.

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TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

DC Current	20 μA ≤ <i>l</i> ≤ 220 μA	-	51 · 10 ⁻⁶ · <i>I</i> + 7,0 nA	I: Measured current, A
DC Current Meters				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: DC Current Ampermeter				In customer place In the laboratory
				calibration is made.
DC Current	220 μA < <i>l</i> ≤ 2,2 mA	-	42 · 10 ⁻⁶ · / + 8 nA	I: Measured current, A
DC Current Meters				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: DC Current Ampermeter				In customer place In the laboratory
				calibration is made.
DC Current	2,2 mA < <i>l</i> ≤ 22 mA	-	44 · 10 ⁻⁶ · <i>l</i> + 4 nA	I: Measured current, A
DC Current Meters				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: DC Current Ampermeter				In customer place In the laboratory
				calibration is made.
DC Current	22 mA < <i>l</i> ≤ 220 mA	-	55 · 10 ⁻⁶ · <i>I</i> + 0,11 μA	I: Measured current, A
DC Current Meters				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: DC Current Ampermeter				In customer place In the laboratory
				calibration is made.
DC Current	220 mA < <i>l</i> ≤ 2,2 A	-	98 · 10 ⁻⁶ · <i>l</i> + 0,27 μA	I: Measured current, A
DC Current Meters				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: DC Current Ampermeter				In customer place In the laboratory
				calibration is made.
DC Current	1,1 A < <i>l</i> ≤ 11 A	-	0,76 · 10 ⁻³ · <i>I</i> + 3,4 mA	I: Measured current, A
DC Current Meters				Direct Comparison Method with FLUKE 5522A Calibrator
Multimeter: DC Current Ampermeter				In customer place In the laboratory
				calibration is made.

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DC Current	11 A < <i>l</i> ≤ 20 A	-	1,0 · 10 ⁻³ · <i>l</i> + 0,75 mA	I: Measured current, A
DC Current Meters				Direct Comparison Method with FLUKE 5522A Calibrator
Multimeter: DC Current Ampermeter				In customer place
				In the laboratory
				calibration is made.
DC Current	10 A ≤ <i>l</i> ≤ 15 A	-	% 0,25	I: Measured current, A
DC Current Meters				Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil
Multimeter: DC Current Pensampermeter Clampmeter (toroidal type)				In customer place In the laboratory
				calibration is made.
DC Current	15 A < <i>l</i> < 150 A	-	% 0,27	I: Measured current, A
DC Current Meters				Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil
Multimeter: DC Current Pensampermeter Clampmeter (toroidal type)				In customer place In the laboratory
				calibration is made.
DC Current	150 A ≤ <i>l</i> < 500 A	-	% 0,23	I: Measured current, A
DC Current Meters				Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil
Multimeter: DC Current Pensampermeter Clampmeter (toroidal type)				In customer place In the laboratory
				calibration is made.
DC Current	500 A ≤ <i>I</i> ≤ 1000 A	-	% 0,24	I: Measured current, A
DC Current Meters				Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil
Multimeter: DC Current Pensampermeter Clampmeter (toroidal type)				In customer place In the laboratory
				calibration is made.
DC Current	10 A ≤ <i>l</i> ≤ 15 A	-	% 0,56	I: Measured current, A
DC Current Meters				Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil
Multimeter: DC Current Pensampermeter Clampmeter (non-toroidal type)				In customer place In the laboratory
				calibration is made.

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

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DC Current	15 A < <i>l</i> < 150 A	-	% 1,1	I: Measured current, A
DC Current Meters				Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil
Multimeter: DC Current Pensampermeter Clampmeter (non-toroidal type)				In customer place In the laboratory
				calibration is made.
DC Current	150 A ≤ <i>l</i> < 500 A	-	% 0,65	I: Measured current, A
DC Current Meters				Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil
Multimeter: DC Current Pensampermeter Clampmeter (non-toroidal type)				In customer place In the laboratory
				calibration is made.
DC Current	500 A ≤ <i>l</i> ≤ 1000 A	-	% 0,48	I: Measured current, A
DC Current Meters				Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil
Multimeter: DC Current Pensampermeter Clampmeter (non-toroidal type)				In customer place In the laboratory
				calibration is made.
DC Current	20 μA ≤ <i>l</i> ≤ 200 μA	-	16 · 10 ⁻⁶ · <i>I</i> + 0,4 nA	I: Measured current, A
DC Current Sources				Direct Comparison Method with Fluke 8508A Reference Multimeter
DC Current Source Calibrator: DC Current				In customer place In the laboratory
				calibration is made.
DC Current	200 μA < <i>l</i> ≤ 2 mA	-	18 · 10 ⁻⁶ · / + 0,12 nA	I: Measured current, A
DC Current Sources				Direct Comparison Method with Fluke 8508A Reference Multimeter
DC Current Source Calibrator: DC Current				In customer place In the laboratory
				calibration is made.
DC Current	2 mA < <i>l</i> ≤ 20 mA	-	17 · 10 ⁻⁶ · <i>I</i> + 1,7 nA	I: Measured current, A
DC Current Sources			·	Direct Comparison Method with Fluke 8508A Reference Multimeter
DC Current Source Calibrator: DC Current				In customer place In the laboratory
				calibration is made.

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DC Current	20 mA < <i>l</i> ≤ 200 mA	-	52 · 10 ⁻⁶ · <i>I</i> + 0,21 μA	I: Measured current, A
DC Current Sources				Direct Comparison Method with Fluke 8508A Reference Multimeter
DC Current Source Calibrator: DC Current				In customer place In the laboratory
				calibration is made.
DC Current	200 mA < <i>l</i> ≤ 2 A	-	0,24 · 10 ⁻³ · <i>I</i> + 4 mA	I: Measured current, A
DC Current Sources				Direct Comparison Method with Fluke 8508A Reference Multimeter
DC Current Source Calibrator: DC Current				In customer place In the laboratory
				calibration is made.
DC Current	2 A < I ≤ 20 A	-	4,4 · 10 ⁻⁴ · <i>I</i> + 0,5 mA	I: Measured current, A
DC Current Sources				Direct Comparison Method with Fluke 8508A Reference Multimeter
DC Current Source Calibrator: DC Current				In customer place In the laboratory
				calibration is made.
DC Current	20 A ≤ <i>l</i> ≤ 30 A	-	3,6 mA/A	I: Measured current, A
DC Current Sources				Direct Comparison Method with Fluke 5320A Reference Multimeter
DC Current Source Calibrator: DC Current				In customer place In the laboratory
				calibration is made.
DC Current	10 A ≤ <i>I</i> ≤ 100 A	-	1 · 10 ⁻³ · / + 10 mA	I: Measured current, A
DC High Current Sources				Using Fluke 8508A and Shunt Resistor
				 In customer place In the laboratory calibration is made.
AC Voltage	2,2 mV ≤ <i>U</i> ≤ 22 mV	10 Hz ≤ <i>f</i> ≤ 20 Hz	0,26 · 10 ⁻³ · <i>U</i> + 4,0 μV	U: Measured voltage, V
AC Voltage Meters				f: Frequency, Hz Direct Comparison Method with FLUKE 5720A
Multimeter: AC Voltage AC Voltmeter				Calibrator In customer place In the laboratory
				calibration is made.

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TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

AC Voltage AC Voltage Meters Multimeter: AC Voltage AC Voltage AC Voltage AC Voltage Meters Multimeter: AC Voltage AC Voltmeter	2,2 mV ≤ U ≤ 22 mV 2,2 mV ≤ U ≤ 22 mV	20 Hz < f ≤ 40 Hz 40 Hz < f ≤ 20 kHz	0,11 · 10 ⁻³ · <i>U</i> + 4,0 μV 0,10 · 10 ⁻³ · <i>U</i> + 4,0 μV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made. U: Measured voltage, V f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.
AC Voltage AC Voltage Meters Multimeter: AC Voltage AC Voltmeter	2,2 mV ≤ <i>U</i> ≤ 22 mV	20 kHz < f ≤ 100 kHz	0,51 · 10 ^{·3} · <i>U</i> + 5,0 μV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.
AC Voltage AC Voltage Meters Multimeter: AC Voltage AC Voltmeter	22 mV < <i>U</i> ≤ 220 mV	10 Hz ≤ f ≤ 20 Hz	0,29 · 10 ⁻³ · <i>U</i> + 12 μV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.
AC Voltage AC Voltage Meters Multimeter: AC Voltage AC Voltmeter	22 mV < <i>U</i> ≤ 220 mV	20 Hz < f ≤ 40 Hz	0,11 · 10 ⁻³ · <i>U</i> + 6,8 μV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.
AC Voltage AC Voltage Meters Multimeter: AC Voltage AC Voltmeter	22 mV < <i>U</i> ≤ 220 mV	40 Hz < f ≤ 20 kHz	0,10 · 10 ⁻³ · <i>U</i> + 6,9 μV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.

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TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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

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TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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AC Voltage AC Voltage Meters	220 mV < <i>U</i> ≤ 2,2 V	20 Hz < f ≤ 40 Hz	0,1 · 10 ⁻³ · <i>U</i> + 15 μV	U: Measured voltage, V f: Frequency, Hz
				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: AC Voltage AC Voltmeter				In customer place In the laboratory
				calibration is made.
AC Voltage	220 mV < <i>U</i> ≤ 2,2 V	40 Hz < f ≤ 20 kHz	49 · 10 ⁻⁶ · <i>U</i> + 8 μV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Meters				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: AC Voltage AC Voltmeter				In customer place In the laboratory
				calibration is made.
AC Voltage	220 mV < <i>U</i> ≤ 2,2 V	20 kHz < f ≤ 50 kHz	77 · 10 ⁻⁶ · <i>U</i> + 10 μV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Meters				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: AC Voltage AC Voltmeter				In customer place In the laboratory
				calibration is made.
AC Voltage	220 mV < <i>U</i> ≤ 2,2 V	50 kHz < <i>f</i> ≤ 100 kHz	0,12 · 10 ⁻³ · <i>U</i> + 30 μV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Meters				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: AC Voltage AC Voltmeter				In customer place In the laboratory
				calibration is made.
AC Voltage	220 mV < <i>U</i> ≤ 2,2 V	100 kHz < <i>f</i> ≤ 300 kHz	0,39 · 10 ⁻³ · <i>U</i> + 80 μV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Meters				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: AC Voltage AC Voltmeter				In customer place In the laboratory
				calibration is made.
AC Voltage	220 mV < <i>U</i> ≤ 2,2 V	300 kHz < f ≤ 500 kHz	0,96 · 10 ⁻³ · <i>U</i> + 0,2 mV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Meters				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: AC Voltage AC Voltmeter				In customer place In the laboratory
				calibration is made.

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AC Voltage	220 mV < <i>U</i> ≤ 2,2 V	500 kHz < f ≤ 1 MHz	1,7 · 10 ⁻³ · <i>U</i> + 0,3 mV	U: Measured voltage, V
AC Voltage Meters				f: Frequency, Hz
Multimeter: AC Voltage AC Voltmeter				Direct Comparison Method with FLUKE 5720A Calibrator
AC Voltmeter				In customer place In the laboratory
				calibration is made.
AC Voltage	2,2 V < U ≤ 22 V	10 Hz ≤ <i>f</i> ≤ 20 Hz	0,25 · 10 ⁻³ · <i>U</i> + 0,4 mV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Meters				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: AC Voltage AC Voltmeter				In customer place In the laboratory
				calibration is made.
AC Voltage	2,2 V < U ≤ 22 V	20 Hz < f ≤ 40 Hz	0,1 · 10 ⁻³ · <i>U</i> + 0,15 mV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Meters				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: AC Voltage AC Voltmeter				In customer place In the laboratory
				calibration is made.
AC Voltage	2,2 V < U ≤ 22 V	40 Hz < f ≤ 20 kHz	51 · 10 ⁻⁶ · <i>U</i> + 47 μV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Meters				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: AC Voltage AC Voltmeter				In customer place In the laboratory
				calibration is made.
AC Voltage	2,2 V < U ≤ 22 V	20 kHz < f ≤ 50 kHz	79 · 10 ⁻⁶ · <i>U</i> + 98 μV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Meters				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: AC Voltage AC Voltmeter				In customer place In the laboratory
				calibration is made.
AC Voltage	2,2 V < U ≤ 22 V	50 kHz < <i>f</i> ≤ 100 kHz	0,11 · 10 ⁻³ · <i>U</i> + 0,2 mV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Meters				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: AC Voltage AC Voltmeter				In customer place In the laboratory
				calibration is made.

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AC Voltage AC Voltage Meters Multimeter: AC Voltage AC Voltage AC Voltage AC Voltage Meters Multimeter: AC Voltage AC Voltmeter	2,2 V < U ≤ 22 V 2,2 V < U ≤ 22 V	100 kHz < f ≤ 300 kHz 300 kHz < f ≤ 500 kHz	0,29 · 10 ⁻³ · <i>U</i> + 0,59 mV 1,1 · 10 ⁻³ · <i>U</i> + 2 mV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made. U: Measured voltage, V f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.
AC Voltage AC Voltage Meters Multimeter: AC Voltage AC Voltmeter	2,2 V < U ≤ 22 V	500 kHz < <i>f</i> ≤ 1 MHz	1,6 · 10 ⁻³ · <i>U</i> + 3,2 mV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.
AC Voltage AC Voltage Meters Multimeter: AC Voltage AC Voltmeter	22 V < U ≤ 220 V	10 Hz ≤ <i>f</i> ≤ 20 Hz	0,25 · 10 ^{·3} · <i>U</i> + 4 mV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.
AC Voltage AC Voltage Meters Multimeter: AC Voltage AC Voltmeter	22 V < U ≤ 220 V	20 Hz < f ≤ 40 Hz	0,1 · 10 ⁻³ · <i>U</i> + 2 mV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.
AC Voltage AC Voltage Meters Multimeter: AC Voltage AC Voltmeter	22 V < U ≤ 220 V	40 Hz < f ≤ 20 kHz	57 · 10 ⁻⁶ · <i>U</i> + 0,58 mV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.

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AC Voltage AC Voltage Meters Multimeter: AC Voltage AC Voltmeter	22 V < U ≤ 220 V	20 kHz < <i>f</i> ≤ 50 kHz	86 · 10 ⁻⁶ · <i>U</i> + 1 mV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator
AC Voltmeter				In customer placeIn the laboratorycalibration is made.
AC Voltage AC Voltage Meters Multimeter: AC Voltage AC Voltmeter	22 V < U ≤ 220 V	50 kHz < f ≤ 100 kHz	0,16 · 10 ⁻³ · <i>U</i> + 2,5 mV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory
AC Voltage AC Voltage Meters Multimeter: AC Voltage AC Voltmeter	220 V < <i>U</i> ≤ 1000 V	40 Hz ≤ f < 1 kHz	0,11 · 10 ^{·3} · <i>U</i> + 3,5 mV	calibration is made. U: Measured voltage, V f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.
AC Voltage AC Voltage Meters Multimeter: AC Voltage AC Voltmeter	220 V < <i>U</i> ≤ 1000 V	1 kHz < f < 20 kHz	0,18 · 10 ^{·3} · <i>U</i> + 5,7 mV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method with FLUKE 5720A- 5725A Calibrator In customer place In the laboratory calibration is made.
AC Voltage AC Voltage Meters Multimeter: AC Voltage AC Voltmeter	220 V < <i>U</i> ≤ 1000 V	20 kHz < <i>f</i> ≤ 30 kHz	0,67 · 10 ^{·3} · <i>U</i> + 11 mV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method with FLUKE 5720A-5725A Calibrator In customer place In the laboratory calibration is made.
AC Voltage AC Voltage Sources AC Voltage Source Calibrator: AC Voltage	2 mV ≤ <i>U</i> ≤ 200 mV	10 Hz ≤ <i>f</i> ≤ 40 Hz	0,12 · 10 ^{·3} · <i>U</i> + 4 μV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method to Fluke 8508A Reference Multimeter In customer place In the laboratory calibration is made.

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AC Voltage AC Voltage Source AC Voltage Source Calibrator: AC Voltage	2 mV ≤ <i>U</i> ≤ 200 mV	40 Hz < f ≤ 100 Hz 100 Hz < f ≤ 2 kHz	0,12 · 10 ^{·3} · <i>U</i> + 4 μV 0,12 · 10 ^{·3} · <i>U</i> + 2 μV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method to Fluke 8508A Reference Multimeter In customer place In the laboratory calibration is made.
AC Voltage Sources AC Voltage Source Calibrator: AC Voltage	21117 3 0 3 200 1117	100 112 \ 7 3 2 K112	υ,12 × 10 × 2 μν	f: Frequency, Hz Direct Comparison Method to Fluke 8508A Reference Multimeter In customer place In the laboratory calibration is made.
AC Voltage AC Voltage Sources AC Voltage Source Calibrator: AC Voltage	2 mV ≤ <i>U</i> ≤ 200 mV	2 kHz < f ≤ 10 kHz	0,12 · 10 ^{·3} · <i>U</i> + 4 μV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method to Fluke 8508A Reference Multimeter In customer place In the laboratory calibration is made.
AC Voltage AC Voltage Source AC Voltage Source Calibrator: AC Voltage	2 mV ≤ <i>U</i> ≤ 200 mV	10 kHz < <i>f</i> ≤ 30 kHz	0,31 · 10 ^{·3} · <i>U</i> + 8 μV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method to Fluke 8508A Reference Multimeter In customer place In the laboratory calibration is made.
AC Voltage AC Voltage Sources AC Voltage Source Calibrator: AC Voltage	2 mV ≤ <i>U</i> ≤ 200 mV	30 kHz < <i>f</i> ≤ 100 kHz	0,70 · 10 ^{·3} · <i>U</i> + 20 μV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method to Fluke 8508A Reference Multimeter In customer place In the laboratory calibration is made.
AC Voltage AC Voltage Sources AC Voltage Source Calibrator: AC Voltage	200 mV < <i>U</i> ≤ 2 V	10 Hz ≤ <i>f</i> ≤ 40 Hz	0,11 · 10 ^{·3} · <i>U</i> + 20 μV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method to Fluke 8508A Reference Multimeter In customer place In the laboratory calibration is made.

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AC Voltage AC Voltage Source Calibrator: AC Voltage AC Voltage AC Voltage AC Voltage AC Voltage Sources AC Voltage Source Calibrator: AC Voltage	200 mV < U ≤ 2 V 200 mV < U ≤ 2 V	40 Hz < f ≤ 100 Hz 100 Hz < f ≤ 2 kHz	86 · 10 ⁻⁶ · <i>U</i> + 20 μV 67 · 10 ⁻⁶ · <i>U</i> + 20 μV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method to Fluke 8508A Reference Multimeter In customer place In the laboratory calibration is made. U: Measured voltage, V f: Frequency, Hz Direct Comparison Method to Fluke 8508A Reference Multimeter In customer place In the laboratory calibration is made.
AC Voltage AC Voltage Sources AC Voltage Source Calibrator: AC Voltage	200 mV < <i>U</i> ≤ 2 V	2 kHz < f ≤ 10 kHz	86 · 10 ⁻⁶ · <i>U</i> + 20 μV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method to Fluke 8508A Reference Multimeter In customer place In the laboratory calibration is made.
AC Voltage AC Voltage Sources AC Voltage Source Calibrator: AC Voltage	200 mV < <i>U</i> ≤ 2 V	10 kHz < f ≤ 30 kHz	0,21 · 10 ^{·3} · <i>U</i> + 40 μV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method to Fluke 8508A Reference Multimeter In customer place In the laboratory calibration is made.
AC Voltage AC Voltage Sources AC Voltage Source Calibrator: AC Voltage	200 mV < <i>U</i> ≤ 2 V	30 kHz < <i>f</i> ≤ 100 kHz	0,51 · 10 ^{·3} · <i>U</i> + 0,20 mV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method to Fluke 8508A Reference Multimeter In customer place In the laboratory calibration is made.
AC Voltage AC Voltage Sources AC Voltage Source Calibrator: AC Voltage	200 mV < <i>U</i> ≤ 2 V	100 kHz < f ≤ 300 kHz	3,0 · 10 ⁻³ · <i>U</i> + 2 mV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method to Fluke 8508A Reference Multimeter In customer place In the laboratory calibration is made.

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AC Voltage	200 mV < <i>U</i> ≤ 2 V	300 kHz < f ≤ 1 MHz	10 · 10 ⁻³ · <i>U</i> + 20 mV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Sources				Direct Comparison Method to Fluke 8508A
AC Voltage Source Calibrator: AC Voltage				Reference Multimeter • In customer place
				In the laboratory
				calibration is made.
AC Voltage	2 V < <i>U</i> ≤ 20 V	10 Hz ≤ <i>f</i> ≤ 40 Hz	0,11 · 10 ⁻³ · <i>U</i> + 0,2 mV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Sources				Direct Comparison Method to Fluke 8508A Reference Multimeter
AC Voltage Source Calibrator: AC Voltage				In customer place In the laboratory
				calibration is made.
AC Voltage	2 V < U ≤ 20 V	40 Hz < f ≤ 100 Hz	86 · 10 ⁻⁶ · <i>U</i> + 0,2 mV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Sources				Direct Comparison Method to Fluke 8508A
AC Voltage Source Calibrator: AC Voltage				Reference Multimeter • In customer place
				In the laboratory
				calibration is made.
AC Voltage	2 V < <i>U</i> ≤ 20 V	100 Hz < <i>f</i> ≤ 2 kHz	67 · 10 ⁻⁶ · <i>U</i> + 0,2 mV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Sources				Direct Comparison Method to Fluke 8508A Reference Multimeter
AC Voltage Source Calibrator: AC Voltage				In customer place In the laboratory
				calibration is made.
AC Voltage	2 V < U ≤ 20 V	2 kHz < <i>f</i> ≤ 10 kHz	86 · 10 ⁻⁶ · <i>U</i> + 0,2 mV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Sources				Direct Comparison Method to Fluke 8508A Reference Multimeter
AC Voltage Source Calibrator: AC Voltage				In customer place
				In the laboratory calibration is made.
AC Voltage	2 V < U ≤ 20 V	10 kHz < f ≤ 30 kHz	0,2 · 10 ^{·3} · <i>U</i> + 0,4 mV	U: Measured voltage, V
AC Voltage Sources				f: Frequency, Hz Direct Comparison Method to Fluke 8508A
AC Voltage Source Calibrator: AC Voltage				Reference Multimeter
				In customer place In the laboratory
				calibration is made.

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AC Voltage AC Voltage Sources	2 V < <i>U</i> ≤ 20 V	30 kHz < <i>f</i> ≤ 100 kHz	0,5 · 10 ^{·3} · <i>U</i> + 2 mV	U: Measured voltage, V f: Frequency, Hz Direct Comparison Method to Fluke 8508A
AC Voltage Source Calibrator: AC Voltage				Reference Multimeter In customer place In the laboratory
				calibration is made.
AC Voltage	2 V < U ≤ 20 V	100 kHz < f ≤ 300 kHz	3,0 · 10 ⁻³ · <i>U</i> + 20 mV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Source				Direct Comparison Method to Fluke 8508A Reference Multimeter
AC Voltage Source Calibrator: AC Voltage				In customer place In the laboratory
				calibration is made.
AC Voltage AC Voltage Sources	2 V < U ≤ 20 V	300 kHz < <i>f</i> ≤ 1 MHz	$10 \cdot 10^{-3} \cdot U + 0.2 \text{ V}$	U: Measured voltage, V f: Frequency, Hz
AC Voltage Source Calibrator: AC Voltage				Direct Comparison Method to Fluke 8508A Reference Multimeter
Calibrator: AC Voltage				In customer place In the laboratory
				calibration is made.
AC Voltage	20 V < <i>U</i> ≤ 200 V	10 Hz ≤ <i>f</i> ≤ 40 Hz	0,11 · 10 ⁻³ · <i>U</i> + 2 mV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Sources AC Voltage Source				Direct Comparison Method to Fluke 8508A Reference Multimeter
AC Voltage Source Calibrator: AC Voltage				In customer place In the laboratory
				calibration is made.
AC Voltage AC Voltage Sources	20 V < <i>U</i> ≤ 200 V	40 Hz < <i>f</i> ≤ 100 Hz	92 · 10 ⁻⁶ · <i>U</i> + 1,9 mV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Source				Direct Comparison Method to Fluke 8508A Reference Multimeter
Calibrator: AC Voltage				In customer place In the laboratory
				calibration is made.
AC Voltage	20 V < <i>U</i> ≤ 200 V	100 Hz < <i>f</i> ≤ 2 kHz	75 · 10 ⁻⁶ · <i>U</i> + 1,9 mV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Sources AC Voltage Source				Direct Comparison Method to Fluke 8508A Reference Multimeter
AC Voltage Source Calibrator: AC Voltage				In customer place In the laboratory
				calibration is made.

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AC Voltage	20 V < <i>U</i> ≤ 200 V	2 kHz < f ≤ 10 kHz	92 · 10 ⁻⁶ · <i>U</i> + 1,9 mV	U: Measured voltage, V
AC Voltage Sources				f: Frequency, Hz
AC Voltage Source Calibrator: AC Voltage				Direct Comparison Method to Fluke 8508A Reference Multimeter
Calibrator: AC Voltage				In customer place In the laboratory
				calibration is made.
AC Voltage	20 V < <i>U</i> ≤ 200 V	10 kHz < f ≤ 30 kHz	0,20 · 10 ⁻³ · <i>U</i> + 4 mV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Sources				Direct Comparison Method to Fluke 8508A Reference Multimeter
AC Voltage Source Calibrator: AC Voltage				In customer place In the laboratory
				calibration is made.
AC Voltage	20 V < <i>U</i> ≤ 200 V	30 kHz < f ≤ 100 kHz	0,50 · 10 ⁻³ · <i>U</i> + 20 mV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Source				Direct Comparison Method to Fluke 8508A Reference Multimeter
AC Voltage Source Calibrator: AC Voltage				In customer place In the laboratory
				calibration is made.
AC Voltage	200 V < <i>U</i> ≤ 1000 V	40 Hz < f ≤ 10 kHz	97 · 10 ⁻⁶ · <i>U</i> + 19 mV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Sources				Direct Comparison Method to Fluke 8508A Reference Multimeter
AC Voltage Source Calibrator: AC Voltage				In customer place In the laboratory
				calibration is made.
AC Voltage	200 V < <i>U</i> ≤ 1000 V	10 kHz < f ≤ 30 kHz	0,21 · 10 ⁻³ · <i>U</i> + 40 mV	U: Measured voltage, V f: Frequency, Hz
AC Voltage Sources				Direct Comparison Method to Fluke 8508A Reference Multimeter
AC Voltage Source Calibrator: AC Voltage				In customer place In the laboratory
				calibration is made.
AC Voltage	200 V < <i>U</i> ≤ 1000 V	30 kHz < f ≤ 100 kHz	0,51 · 10 ⁻³ · <i>U</i> + 0,20 V	U: Measured voltage, V f: Frequency, Hz
AC Voltage Sources				Direct Comparison Method to Fluke 8508A Reference Multimeter
AC Voltage Source Calibrator: AC Voltage				In customer place In the laboratory
				calibration is made.

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AC Current AC Current Meter Multimeter: AC Current AC Amperemeter	100 μA ≤ <i>l</i> ≤ 220 μA	10 Hz ≤ f ≤ 20 Hz	0,82 mA/A	I: Measured current, A f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.
AC Current AC Current Meter Multimeter: AC Current AC Amperemeter	100 μA ≤ <i>l</i> ≤ 220 μA	20 Hz < f ≤ 40 Hz	0,72 mA/A	I: Measured current, A f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.
AC Current AC Current Meter Multimeter: AC Current AC Amperemeter	100 μA ≤ <i>I</i> ≤ 220 μA	40 Hz < <i>f</i> ≤ 1 kHz	0,31 mA/A	I: Measured current, A f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.
AC Current AC Current Meter Multimeter: AC Current AC Amperemeter	100 μA ≤ <i>l</i> ≤ 220 μA	1 kHz < f ≤ 5 kHz	0,56 mA/A	I: Measured current, A f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.
AC Current AC Current Meter Multimeter: AC Current AC Amperemeter	100 μA ≤ <i>l</i> ≤ 220 μA	5 kHz < f ≤ 10 kHz	2,2 mA/A	I: Measured current, A f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.
AC Current AC Current Meter Multimeter: AC Current AC Amperemeter	220 μA < <i>l</i> ≤ 2,2 mA	10 Hz ≤ f ≤ 20 Hz	0,42 mA/A	I: Measured current, A f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.

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AC Current AC Current Meter Multimeter: AC Current AC Amperemeter AC Current AC Current AC Current Meter Multimeter: AC Current AC Amperemeter	220 μA < <i>l</i> ≤ 2,2 mA 220 μA < <i>l</i> ≤ 2,2 mA	20 Hz < f ≤ 40 Hz 40 Hz < f ≤ 1 kHz	0,30 mA/A 0,22 mA/A	I: Measured current, A f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made. I: Measured current, A f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.
AC Current AC Current Meter Multimeter: AC Current AC Amperemeter	220 μA < <i>l</i> ≤ 2,2 mA	1 kHz < <i>f</i> ≤ 5 kHz	0,46 mA/A	I: Measured current, A f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.
AC Current AC Current Meter Multimeter: AC Current AC Amperemeter	220 μA < <i>l</i> ≤ 2,2 mA	5 kHz < f ≤ 10 kHz	1,8 mA/A	I: Measured current, A f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.
AC Current AC Current Meter Multimeter: AC Current AC Amperemeter	2,2 mA < <i>l</i> ≤ 22 mA	10 Hz ≤ f ≤ 20 Hz	0,32 mA/A	I: Measured current, A f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.
AC Current AC Current Meter Multimeter: AC Current AC Amperemeter	2,2 mA < <i>l</i> ≤ 22 mA	20 Hz < f ≤ 40 Hz	0,22 mA/A	I: Measured current, A f: Frequency, Hz Direct Comparison Method with FLUKE 5720A Calibrator In customer place In the laboratory calibration is made.

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AC Current	2,2 mA < <i>l</i> ≤ 22 mA	40 Hz < <i>f</i> ≤ 1 kHz	0,16 mA/A	I: Measured current, A
AC Current Meter	·			f: Frequency, Hz
Multimeter: AC Current				Direct Comparison Method with FLUKE 5720A Calibrator
AC Amperemeter				In customer place In the laboratory
				calibration is made.
AC Current	2,2 mA < <i>l</i> ≤ 22 mA	1 kHz < <i>f</i> ≤ 5 kHz	0,30 mA/A	I: Measured current, A f: Frequency, Hz
AC Current Meter				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: AC Current AC Amperemeter				In customer place In the laboratory
				calibration is made.
AC Current	2,2 mA < <i>l</i> ≤ 22 mA	5 kHz < <i>f</i> ≤ 10 kHz	1,7 mA/A	I: Measured current, A f: Frequency, Hz
AC Current Meter Multimeter: AC Current				Direct Comparison Method with FLUKE 5720A Calibrator
AC Amperemeter				In customer place In the laboratory
				calibration is made.
AC Current	22 mA < <i>I</i> ≤ 220 mA	10 Hz - 20 Hz	0,53 mA/A	I: Measured current, A f: Frequency, Hz
AC Current Meter				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: AC Current AC Amperemeter				In customer place In the laboratory
				calibration is made.
AC Current	22 mA < <i>l</i> ≤ 220 mA	20 Hz < f ≤ 40 Hz	0,19 mA/A	I: Measured current, A f: Frequency, Hz
AC Current Meter				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: AC Current AC Amperemeter				In customer place In the laboratory
				calibration is made.
AC Current	22 mA < <i>l</i> ≤ 220 mA	40 Hz < f ≤ 1 kHz	0,23 mA/A	I: Measured current, A f: Frequency, Hz
AC Current Meter				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: AC Current AC Amperemeter				In customer place In the laboratory
				calibration is made.

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AC Current	22 mA < <i>l</i> ≤ 220 mA	1 kHz < <i>f</i> ≤ 5 kHz	0,36 mA/A	I: Measured current, A f: Frequency, Hz
AC Current Meter				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: AC Current AC Amperemeter				In customer place In the laboratory
				calibration is made.
AC Current	22 mA < <i>l</i> ≤ 220 mA	5 kHz < <i>f</i> ≤ 10 kHz	1,6 mA/A	I: Measured current, A f: Frequency, Hz
AC Current Meter				Direct Comparison Method with FLUKE 5720A
Multimeter: AC Current AC Amperemeter				Calibrator In customer place
				In the laboratory adilytration is made.
				calibration is made.
AC Current	220 mA < <i>l</i> ≤ 2,2 A	20 Hz ≤ <i>f</i> ≤ 1 kHz	0,34 mA/A	I: Measured current, A f: Frequency, Hz
AC Current Meter				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: AC Current AC Amperemeter				In customer place In the laboratory
				calibration is made.
AC Current	220 mA < <i>l</i> ≤ 2,2 A	1 kHz < <i>f</i> ≤ 5 kHz	0,55 mA/A	I: Measured current, A f: Frequency, Hz
AC Current Meter				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: AC Current AC Amperemeter				In customer place In the laboratory
				calibration is made.
AC Current	220 mA < <i>l</i> ≤ 2,2 A	5 kHz < <i>f</i> ≤ 10 kHz	8,1 mA/A	I: Measured current, A f: Frequency, Hz
AC Current Meter				Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter: AC Current AC Amperemeter				In customer place
				In the laboratory calibration is made.
AC Current	2,2 A < <i>l</i> ≤ 11 A	40 Hz ≤ <i>f</i> ≤ 1 kHz	2,3 mA/A	I: Measured current, A f: Frequency, Hz
AC Current Meter				Direct Comparison Method with FLUKE 5720A-
Multimeter: AC Current				5725A Calibrator
AC Amperemeter				In customer place In the laboratory
				calibration is made.
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TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

AC Current AC Current Meter Multimeter: AC Current AC Amperemeter AC Current AC Current AC Current Meter Multimeter: AC Current AC Amperemeter	2,2 A < I ≤ 11 A 2,2 A < I ≤ 11 A	1 kHz < f ≤ 5 kHz 5 kHz < f ≤ 10 kHz	2,5 mA/A 4,5 mA/A	I: Measured current, A f: Frequency, Hz Direct Comparison Method with FLUKE 5720A-5725A Calibrator In customer place In the laboratory calibration is made. I: Measured current, A f: Frequency, Hz Direct Comparison Method with FLUKE 5720A-5725A Calibrator In customer place In the laboratory calibration is made.
AC Current AC Current Meter Multimeter: AC Current AC Amperemeter AC Current AC Current Meter Multimeter: AC Current AC Amperemeter	11 A ≤ <i>I</i> ≤ 20 A 11 A ≤ <i>I</i> ≤ 20 A	45 Hz ≤ f ≤ 1 kHz 1 kHz ≤ f ≤ 5 kHz	6,3 mA/A % 3,1	I: Measured current, A f: Frequency, Hz Direct Comparison Method with FLUKE 5522A Calibrator In customer place In the laboratory calibration is made. I: Measured current, A f: Frequency, Hz Direct Comparison Method with FLUKE 5522A Calibrator In customer place In the laboratory
AC Current AC Current Meter Pensampermeter Clampmeter (toroidal type)	10 A ≤ <i>I</i> ≤ 15 A	45 Hz ≤ f ≤ 65 Hz	% 0,28	calibration is made. I: Measured current, A f: Frequency, Hz Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil In customer place In the laboratory calibration is made.
AC Current AC Current Meter Pensampermeter Clampmeter(toroidal type)	10 A ≤ <i>l</i> ≤ 15 A	65 Hz < f ≤ 440 Hz	% 0,65	I: Measured current, A f: Frequency, Hz Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil In customer place In the laboratory calibration is made.

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AC Current AC Current Meter Pensampermeter Clampmeter(toroidal type)	15 A < / < 150 A	45 Hz ≤ f ≤ 65 Hz	% 0,35	I: Measured current, A f: Frequency, Hz Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil In customer place In the laboratory calibration is made.
AC Current AC Current Meter Pensampermeter Clampmeter(toroidal type)	15 A < <i>l</i> < 150 A	65 Hz < <i>f</i> ≤ 440 Hz	% 0,76	I: Measured current, A f: Frequency, Hz Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil In customer place In the laboratory calibration is made.
AC Current AC Current Meter Pensampermeter Clampmeter(toroidal type)	150 A ≤ <i>l</i> < 500 A	45 Hz ≤ f ≤ 65 Hz	% 0,28	I: Measured current, A f: Frequency, Hz Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil In customer place In the laboratory calibration is made.
AC Current AC Current Meter Pensampermeter Clampmeter(toroidal type)	150 A ≤ <i>l</i> < 500 A	65 Hz < f ≤ 440 Hz	% 0,67	I: Measured current, A f: Frequency, Hz Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil In customer place In the laboratory calibration is made.
AC Current AC Current Meter Pensampermeter Clampmeter(toroidal type)	500 A ≤ <i>I</i> ≤ 1000 A	45 Hz ≤ f ≤ 65 Hz	% 0,27	I: Measured current, A f: Frequency, Hz Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil In customer place In the laboratory calibration is made.

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AC Current AC Current Meter Pensampermeter Clampmeter (toroidal type)	500 A ≤ <i>l</i> ≤ 1000 A	65 Hz < f ≤ 440 Hz	% 0,64	I: Measured current, A f: Frequency, Hz Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil In customer place In the laboratory calibration is made.
AC Current AC Current Meter Pensampermeter Clampmeter(non-toroidal type)	10 A ≤ <i>l</i> ≤ 15 A	45 Hz ≤ <i>f</i> ≤ 65 Hz	% 0,68	I: Measured current, A f: Frequency, Hz Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil In customer place In the laboratory calibration is made.
AC Current AC Current Meter Pensampermeter Clampmeter(non-toroidal type)	10 A ≤ <i>l</i> ≤ 15 A	65 Hz < f ≤ 440 Hz	% 1,0	I: Measured current, A f: Frequency, Hz Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil In customer place In the laboratory calibration is made.
AC Current AC Current Meter Pensampermeter Clampmeter(non-toroidal type)	15 A < <i>l</i> < 150 A	45 Hz ≤ f ≤ 65 Hz	% 1,8	I: Measured current, A f: Frequency, Hz Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil In customer place In the laboratory calibration is made.
AC Current AC Current Meter Pensampermeter Clampmeter(non-toroidal type)	15 A < <i>l</i> < 150 A	65 Hz < f ≤ 440 Hz	% 2,1	I: Measured current, A f: Frequency, Hz Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil In customer place In the laboratory calibration is made.

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AC Current	150 A ≤ <i>l</i> < 500 A	45 Hz ≤ <i>f</i> ≤ 65 Hz	% 0,90	I: Measured current, A
AC Current Meter				f: Frequency, Hz
Pensampermeter Clampmeter(non-toroidal type)				Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil
				In customer place In the laboratory
				calibration is made.
AC Current	150 A ≤ <i>l</i> < 500 A	65 Hz < <i>f</i> ≤ 440 Hz	% 1,3	I: Measured current, A f: Frequency, Hz
AC Current Meter				Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil
Pensampermeter Clampmeter(non-toroidal type)				
				In customer place In the laboratory
				calibration is made.
AC Current	500 A ≤ <i>l</i> ≤ 1000 A	45 Hz ≤ <i>f</i> ≤ 65 Hz	% 0,59	I: Measured current, A f: Frequency, Hz
AC Current Meter Pensampermeter Clampmeter(non-toroidal type)				Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil
Clampmeter(non-toroidal type)				In customer place In the laboratory
				calibration is made.
AC Current	500 A ≤ <i>l</i> ≤ 1000 A	65 Hz < <i>f</i> ≤ 440 Hz	% 0,92	I: Measured current, A f: Frequency, Hz
AC Current Meter Pensampermeter				Direct Comparison Method with Fluke calibrator and Fluke5500A/Coil
Clampmeter(non-toroidal type)				In customer place In the laboratory
				calibration is made.
AC Current	100 μA ≤ <i>l</i> ≤ 200 μA	10 Hz ≤ <i>f</i> ≤ 10 kHz	0,29 · 10 ⁻³ · / + 19 nA	I: Current, A f: Frequency, Hz
AC Current Sources AC Current Source Calibrator: AC Current				Direct Comparison method to Fluke 8508A Reference Multimeter In customer place In the laboratory
				calibration is made.
AC Current	100 μA ≤ <i>l</i> ≤ 200 μA	10 kHz < <i>f</i> ≤ 30 kHz	0,72 · 10 ⁻³ · / + 18 nA	I: Current, A f: Frequency, Hz
AC Current Sources				Direct Comparison method to Fluke 8508A
AC Current Source Calibrator: AC Current				Reference Multimeter In customer place In the laboratory
				calibration is made.

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AC Current AC Current Sources AC Current Source Calibrator: AC Current	200 μA < <i>l</i> ≤ 2 mA	10 Hz ≤ <i>f</i> ≤ 10 kHz	0,26 · 10 ^{·3} · / + 0,2 μA	I: Current, A f: Frequency, Hz Direct Comparison method to Fluke 8508A Reference Multimeter In customer place In the laboratory calibration is made.
AC Current AC Current Sources AC Current Source Calibrator: AC Current	200 μA < <i>l</i> ≤ 2 mA	10 kHz < <i>f</i> ≤ 30 kHz	0,61 · 10 ^{·3} · / + 0,2 μA	I: Current, A f: Frequency, Hz Direct Comparison method to Fluke 8508A Reference Multimeter In customer place In the laboratory calibration is made.
AC Current AC Current Sources AC Current Source Calibrator: AC Current	2 mA ≤ <i>l</i> < 20 mA	10 Hz ≤ f ≤ 10 kHz	0,26 · 10 ^{·3} · / + 2 μA	I: Current, A f: Frequency, Hz Direct Comparison method to Fluke 8508A Reference Multimeter In customer place In the laboratory calibration is made.
AC Current AC Current Sources AC Current Source Calibrator: AC Current	2 mA < <i>l</i> ≤ 20 mA	10 kHz < <i>f</i> ≤ 30 kHz	0,61 · 10 ^{·3} · / + 2 μA	I: Current, A f: Frequency, Hz Direct Comparison method to Fluke 8508A Reference Multimeter In customer place In the laboratory calibration is made.
AC Current AC Current Sources AC Current Source Calibrator: AC Current	20 mA < <i>l</i> ≤ 200 mA	10 Hz ≤ f ≤ 10 kHz	0,26 · 10 ^{·3} · / + 20 μA	I: Current, A f: Frequency, Hz Direct Comparison method to Fluke 8508A Reference Multimeter In customer place In the laboratory calibration is made.
AC Current AC Current Sources AC Current Source Calibrator: AC Current	20 mA < / ≤ 200 mA	10 kHz < f ≤ 30 kHz	0,61 · 10 ^{·3} · l + 20 μA	I: Current, A f: Frequency, Hz Direct Comparison method to Fluke 8508A Reference Multimeter In customer place In the laboratory calibration is made.
AC Current AC Current Sources AC Current Source Calibrator: AC Current	200 mA < <i>l</i> ≤ 2 A	10 Hz ≤ <i>f</i> ≤ 2 kHz	0,60 · 10 ⁻³ · / + 0,2 mA	I: Current, A f: Frequency, Hz Direct Comparison method to Fluke 8508A Reference Multimeter In customer place In the laboratory calibration is made.

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AC Current AC Current Sources AC Current Source Calibrator: AC Current	200 mA < <i>l</i> ≤ 2 A	2 kHz < <i>f</i> ≤ 10 kHz	0,73 · 10 ^{·3} · <i>l</i> + 0,2 mA	I: Current, A f: Frequency, Hz Direct Comparison method to Fluke 8508A Reference Multimeter In customer place In the laboratory
AC Current AC Current Sources AC Current Source	2 A < I ≤ 20 A	10 Hz ≤ <i>f</i> ≤ 2 kHz	0,81 · 10 ^{·3} · <i>I</i> + 2 mA	calibration is made. I: Current, A f: Frequency, Hz Direct Comparison method to Fluke 8508A Reference Multimeter In customer place
Calibrator: AC Current				In the laboratory calibration is made.
AC Current AC Current Sources AC Current Source Calibrator: AC Current	2 A < I ≤ 20 A	2 kHz < <i>f</i> ≤ 10 kHz	2,5 ·10 ^{·3} · <i>l</i> + 2 mA	I: Current, A f: Frequency, Hz Direct Comparison method to Fluke 8508A Reference Multimeter In customer place In the laboratory calibration is made.
DC Resistor DC Resistance Meters Multimeter Resistor Microohmmeter Ohmmeter milliohmmeter	1 mΩ	(23±2)C	0,41 mΩ/Ω	R: Measured Resistance,Ω Direct Comparison Method with 4-pin Reference Resistors In customer place In the laboratory calibration is made.
DC Resistor DC Resistance Meters Multimeter Resistor Microohmmeter Ohmmeter milliohmmeter	10 mΩ	(23±2)C	0,11 mΩ/Ω	R: Measured Resistance,Ω Direct Comparison Method with 4-pin Reference Resistors In customer place In the laboratory calibration is made.
DC Resistor DC Resistance Meters Multimeter Resistor Microohmmeter Ohmmeter milliohmmeter	100 mΩ	(23±2)C	44 μΩ/Ω	R: Measured Resistance,Ω Direct Comparison Method with 4-pin Reference Resistors In customer place In the laboratory calibration is made.

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Direct Comparison Method with 4-pin Reference Resistors Multimeter Resistor Microchmeter DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor Multimeter Resistor Method with 4-pin Reference Resistors Multimeter Resistor Microchmeter Direct Comparison Method with 4-pin Reference Resistors Multimeter Resistor Microchmeter DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor Multimeter Resistor Microchmeter Direct Comparison Method with 4-pin Reference Resistor Resistors Multimeter Resistor Microchmeter Driect Comparison Method with 4-pin Reference Resistor Resistors Multimeter Resistor Multimeter	DC Resistor	1 Ω	(23 ± 2) C	32 μΩ/Ω	R : Measured Resistance,Ω
Microhmmeter DC Resistor DC Resistor DC Resistor DC Resistor Multimeter Resistor Multi	DC Resistance Meters				· · · · · · · · · · · · · · · · · · ·
DC Resistor	Microohmmeter Ohmmeter				
DC Resistor Multimeter Resistor Microohnmeter OD C Resistor Multimeter Resistor Microohnmeter OD C Resistor DC Resistor Multimeter Resistor Microohnmeter Ohnmeter milliohnmeter DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor Multimeter Resistor Microohnmeter Ohnmeter milliohnmeter DC Resistor Multimeter Resistor Microohnmeter Ohnmeter milliohnmeter DC Resistor DC Resistor DC Resistor Multimeter Resistor Ohnmeter Ohnmeter milliohnmeter DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor Multimeter Resistor Microohnmeter Ohnmeter milliohnmeter Multimeter Resistor Microohnmeter Ohnmeter milliohnmeter Multimeter Resistor Microohnmeter Ohnmeter milliohnmeter DC Resistor Are Measured Resistance, Q Direct Comparison Method with 4-pin Reference Resistors - In customer place - In the laboratory calibration is made.	milliohmmeter				calibration is made.
Multimeter Resistors • In customer place Observation • In the laboratory calibration is made. DC Resistor 100 Ω DC Resistance Meters Direct Comparison Method with 4-pin Reference Resistors Multimeter Resistor Microphymeter Ohmmeter of Ohmmeter milliohmmeter • In customer place DC Resistor 1 kΩ DC Resistance Meters 1 kΩ Multimeter Resistor Microphymeter of Microphymeter milliohmmeter 0 Direct Comparison Method with 4-pin Reference Resistors Multimeter Resistor Microphymeter milliohmmeter • In customer place DC Resistor 10 kΩ (23 ± 2) C 14 μΩ/Ω R: Measured Resistance,Ω DC Resistor 10 kΩ (23 ± 2) C 14 μΩ/Ω R: Measured Resistance,Ω DC Resistor 10 kΩ (23 ± 2) C 14 μΩ/Ω R: Measured Resistance,Ω Direct Comparison Method with 4-pin Reference Resistors Resistors In customer place Multimeter Resistor Microphymeter In customer place In the laboratory All properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the properties of the pro	DC Resistor	10 Ω	(23 ± 2) C	37 μΩ/Ω	R : Measured Resistance,Ω
Microohmmeter Ohrmmeter milliohmmeter DC Resistor DC Resistor DC Resistor Multimeter Resistor Microohmmeter Ohrmmeter	DC Resistance Meters				
DC Resistor 100 Ω (23 ± 2) C 14 μΩ/Ω	Microohmmeter Ohmmeter				
DC Resistance Meters Multimeter Resistor Microohmmeter Ohmmeter Ohmmeter Ohmmeter Ohmmeter Ohmmeter Ohmmeter Ohmmeter Ohmmeter Ohmmeter Ohmmeter Ohmmeter DC Resistor DC Resistance Meters Direct Comparison Method with 4-pin Reference ohmmeter Ohmmeter					calibration is made.
Multimeter Resistor Microohmmeter Ohnmeter ohmmeter Ohnmeter milliohmmeter 1 kΩ (23 ± 2) C 13 μΩ/Ω R: Measured Resistance,Ω DC Resistor 1 kΩ (23 ± 2) C 13 μΩ/Ω R: Measured Resistance,Ω DC Resistance Meters Direct Comparison Method with 4-pin Reference Resistors Multimeter Resistor Microohmmeter Ohmmeter milliohmmeter - In customer place - In the laboratory calibration is made. DC Resistor 10 kΩ (23 ± 2) C 14 μΩ/Ω R: Measured Resistance,Ω Direct Comparison Method with 4-pin Reference Resistors Direct Comparison Method with 4-pin Reference Resistors Multimeter Resistor Microohmmeter Ohmmeter Ohmmeter milliohmmeter - In customer place - In the laboratory calibration is made.	DC Resistor	100 Ω	(23 ± 2) C	14 μΩ/Ω	R : Measured Resistance,Ω
Microchmmeter of the laboratory calibration is made. In customer place In the laboratory calibration is made.	DC Resistance Meters				
In the laboratory calibration is made.	Microohmmeter				In customer place
DC Resistor 1 kΩ (23 ± 2) C 13 μΩ/Ω R: Measured Resistance,Ω DC Resistance Meters Direct Comparison Method with 4-pin Reference Resistors Multimeter Resistor Microohmmeter ohmmeter milliohmmeter In customer place • In customer place • In the laboratory DC Resistor 10 kΩ (23 ± 2) C 14 μΩ/Ω R: Measured Resistance,Ω DC Resistance Meters Direct Comparison Method with 4-pin Reference Resistors Multimeter Resistor Microohmmeter Ohmmeter milliohmmeter • In customer place • In the laboratory calibration is made.	milliohmmeter				
Direct Comparison Method with 4-pin Reference Resistors Multimeter Resistor Microohmmeter Ohmmeter milliohmmeter 10 kΩ (23 ± 2) C 14 μΩ/Ω R: Measured Resistance,Ω Direct Comparison Method with 4-pin Reference e In the laboratory calibration is made. R: Measured Resistance,Ω Direct Comparison Method with 4-pin Reference Resistors Multimeter Resistor Microohmmeter Ohmmeter Milliohmmeter Ohmmeter milliohmmeter Ohmmeter ohmmeter Ohmmeter milliohmmeter Ohmmeter milliohmmeter e In customer place e In the laboratory calibration is made.					calibration is made.
Multimeter Resistor Microohmmeter Ohmmeter Ohmmeter milliohmmeter 10 kΩ (23 ± 2) C 14 μΩ/Ω R: Measured Resistance,Ω Direct Comparison Method with 4-pin Reference Resistors Multimeter Resistor Microohmmeter Ohmmeter milliohmmeter Multimeter Resistor Microohmmeter Ohmmeter	DC Resistor	1 kΩ	(23 ± 2) C	13 μΩ/Ω	R : Measured Resistance,Ω
Microohmmeter Ohmmeter Ohmmeter milliohmmeter DC Resistor DC Resistance Meters DC Resistance Meters Multimeter Resistor Microohmmeter Ohmmeter milliohmmeter Ohmmeter milliohmmeter Ohmmeter milliohmmeter Ohmmeter milliohmmeter Ohmmeter milliohmmeter Ohmmeter milliohmmeter Ohmmeter milliohmmeter Ohmmeter milliohmmeter Ohmmeter milliohmmeter Ohmmeter milliohmmeter Ohmmeter milliohmmeter Ohmmeter milliohmmeter Ohmmeter Ohmmeter milliohmmeter Ohmmeter Ohmmeter milliohmmeter O	DC Resistance Meters				
milliohmmeter • In the laboratory calibration is made. DC Resistor DC Resistance Meters DIrect Comparison Method with 4-pin Reference Resistors Multimeter Resistor Microohmmeter Ohmmeter milliohmmeter in the laboratory calibration is made.	Microohmmeter				In customer place
DC Resistor 10 kΩ (23 ± 2) C 14 μΩ/Ω R: Measured Resistance,Ω DC Resistance Meters Direct Comparison Method with 4-pin Reference Resistors Multimeter Resistor Microohmmeter Ohmmeter milliohmmeter • In customer place • In the laboratory calibration is made.	milliohmmeter				
DC Resistance Meters Multimeter Resistor Microohmmeter Ohmmeter milliohmmeter In customer place In the laboratory calibration is made.					calibration is made.
Multimeter Resistor Microohmmeter Ohmmeter milliohmmeter In customer place In the laboratory calibration is made.	DC Resistor	10 kΩ	(23 ± 2) C	14 μΩ/Ω	R : Measured Resistance,Ω
Microohmmeter Ohmmeter milliohmmeter In customer place In the laboratory calibration is made.	DC Resistance Meters				
milliohmmeter • In the laboratory calibration is made.	Microohmmeter				In customer place
DC Resistor 100 kΩ (23 ± 2) C 11 μΩ/Ω R : Measured Resistance,Ω					calibration is made.
	DC Resistor	100 kΩ	(23 ± 2) C	11 μΩ/Ω	R : Measured Resistance,Ω
DC Resistance Meters Direct Comparison Method with 4-pin Reference Resistors	DC Resistance Meters				· · · · · · · · · · · · · · · · · · ·
Multimeter Resistor Microohmmeter	Microohmmeter				. In quetemor place
Ohmmeter Milliohmmeter In customer place In the laboratory					
calibration is made.					calibration is made.

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DC Resistor	1 ΜΩ	(23 ± 2) C	17 μΩ/Ω	R : Measured Resistance,Ω
DC Resistance Meters				Direct Comparison Method with 4-pin Reference Resistors
Multimeter Resistor Microohmmeter Ohmmeter Milliohmmeter				In customer place In the laboratory
				calibration is made.
DC Resistor	10 ΜΩ	(23 ± 2) C	34 μΩ/Ω	R : Measured Resistance,Ω
DC Resistance Meters				Direct Comparison Method with 4-pin Reference Resistors
Multimeter Resistor Microohmmeter Ohmmeter Milliohmmeter				In customer placeIn the laboratorycalibration is made.
DC Resistor	1 GΩ	(23 ± 2) C	0,61 mΩ/Ω	R : Measured Resistance,Ω
DC Resistance Meters	1 012	(23 ± 2) 0	0,0111111/12	Direct Comparison Method with 4-pin Reference Resistors
Multimeter Resistor Microohmmeter Ohmmeter Milliohmmeter				In customer placeIn the laboratorycalibration is made.
DC Resistor DC Resistance Meters	1 Ω	4 Wire (2-Wire for 100 MΩ)	96 μΩ/Ω	R: Measured Resistance,Ω Direct Comparison Method with FLUKE 5720A
Multimeter Resistor Ohmmeter				In customer place In the laboratory
				calibration is made.
DC Resistor	1,9 Ω	4 Wires (2-Wire for 100 MΩ)	98 μΩ/Ω	R : Measured Resistance,Ω
DC Resistance Meters		,		Direct Comparison Method with FLUKE 5720A
Multimeter Resistor Ohmmeter				In customer place In the laboratory
				calibration is made.
DC Resistor	10 Ω	4 Wires (2-Wire for 100 MΩ)	25 μΩ/Ω	R : Measured Resistance,Ω
DC Resistance Meters		(2 WIIC 101 100 WIZ)		Direct Comparison Method with FLUKE 5720A
Multimeter Resistor Ohmmeter				In customer place In the laboratory
				calibration is made.
DC Resistor	19 Ω	4 Wires (2-Wire for 100 MΩ)	26 μΩ/Ω	R : Measured Resistance,Ω
DC Resistance Meters		(2 Mile 101 100 MILE)		Direct Comparison Method with FLUKE 5720A
Multimeter Resistor Ohmmeter				In customer place In the laboratory
				calibration is made.
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DC Resistor	100 Ω	4 Wires	12 μΩ/Ω	R : Measured Resistance,Ω
DC Resistance Meters		(2-Wire for 100 MΩ)		Direct Comparison Method with FLUKE 5720A
Multimeter Resistor Ohmmeter				In customer place In the laboratory calibration is made.
DC Resistor	190 Ω	4 Wires	13 μΩ/Ω	R : Measured Resistance,Ω
DC Resistance Meters		(2-Wire for 100 MΩ)		Direct Comparison Method with FLUKE 5720A
Multimeter Resistor Ohmmeter				In customer place In the laboratory
				calibration is made.
DC Resistor DC Resistance Meters	1 kΩ	4 Wires (2-Wire for 100 M Ω)	10 μΩ/Ω	R: Measured Resistance,Ω
				Direct Comparison Method with FLUKE 5720A
Multimeter Resistor Ohmmeter				In customer place In the laboratory
				calibration is made.
DC Resistor	1,9 kΩ	4 Wires (2-Wire for 100 MΩ)	12 μΩ/Ω	R : Measured Resistance,Ω
DC Resistance Meters		(2 WIIC 101 100 WILZ)		Direct Comparison Method with FLUKE 5720A
Multimeter Resistor Ohmmeter				In customer place In the laboratory
				calibration is made.
DC Resistor	10 kΩ	4 Wires	10 μΩ/Ω	R : Measured Resistance,Ω
DC Resistance Meters		(2-Wire for 100 MΩ)		Direct Comparison Method with FLUKE 5720A
Multimeter Resistor Ohmmeter				In customer place In the laboratory
				calibration is made.
DC Resistor	19 kΩ	4 Wires (2-Wire for 100 MΩ)	12 μΩ/Ω	R : Measured Resistance,Ω
DC Resistance Meters		· · · · · · · · · · · · · · · · · · ·		Direct Comparison Method with FLUKE 5720A
Multimeter Resistor Ohmmeter				In customer place In the laboratory
				calibration is made.
DC Resistor	100 kΩ	4 Wires (2-Wire for 100 MΩ)	13 μΩ/Ω	R : Measured Resistance,Ω
DC Resistance Meters		(5-AAIIG IOL LOO IAIT)		Direct Comparison Method with FLUKE 5720A
Multimeter Resistor Ohmmeter				In customer place In the laboratory
				calibration is made.

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DC Resistor	190 kΩ	4 Wires (2-Wire for 100 MΩ)	14 μΩ/Ω	R : Measured Resistance,Ω
DC Resistance Meters		(2 11110 101 100 1112)		Direct Comparison Method with FLUKE 5720A
Multimeter Resistor Ohmmeter				In customer place In the laboratory
				calibration is made.
DC Resistor	1 ΜΩ	4 Wires (2-Wire for 100 MΩ)	21 μΩ/Ω	R : Measured Resistance, Ω
DC Resistance Meters		(2 WIIC 101 100 WI2)		Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter Resistor Ohmmeter				In customer place In the laboratory
				calibration is made.
DC Resistor	1,9 ΜΩ	4 Wires (2-Wire for 100 MΩ)	27 μΩ/Ω	R: Measured Resistance, Ω
DC Resistance Meters		(=)		Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter Resistor Ohmmeter				In customer place In the laboratory
				calibration is made.
DC Resistor	10 ΜΩ	4 Wires (2-Wire for 100 MΩ)	41 μΩ/Ω	R : Measured Resistance, Ω
DC Resistance Meters		(=)		Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter Resistor Ohmmeter				In customer place In the laboratory
				calibration is made.
DC Resistor	19 ΜΩ	4 Wires (2-Wire for 100 MΩ)	55 μΩ/Ω	R: Measured Resistance, Ω
DC Resistance Meters		(=)		Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter Resistor Ohmmeter				In customer place In the laboratory
		_		calibration is made.
DC Resistor	100 ΜΩ	4 Wires (2-Wire for 100 MΩ)	0,11 mΩ/Ω	R: Measured Resistance, Ω
DC Resistance Meters		(= 1		Direct Comparison Method with FLUKE 5720A Calibrator
Multimeter Resistor Ohmmeter				In customer place In the laboratory
				calibration is made.

Annex of the Certificate (Page 55/79) Accreditation Scope



TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

DO Decistes	00 < 0 < 11 0	01 10-6 0 70 0	Bulliana Pacintona C
DC Resistor	0 Ω ≤ <i>R</i> < 11 Ω	31 · 10 ⁻⁶ . <i>R</i> + 7,8 mΩ	R: Measured Resistance, Ω
DC Resistance Meters			Direct Comparison Method with FLUKE 5522A Calibrator
Multimeter Resistor Ohmmeter			In customer place In the laboratory
			calibration is made.
DC Resistor	11 Ω ≤ <i>R</i> < 33 Ω	$23 \cdot 10^{-6}$. $R + 12$ mΩ	R: Measured Resistance, Ω
DC Resistance Meters			Direct Comparison Method with FLUKE 5522A Calibrator
Multimeter Resistor Ohmmeter			In customer place In the laboratory
			calibration is made.
DC Resistor	33 Ω ≤ <i>R</i> ≤ 110 Ω	$22 \cdot 10^{-6}$. $R + 12$ mΩ	R : Measured Resistance, Ω
DC Resistance Meters			Direct Comparison Method with FLUKE 5522A Calibrator
Multimeter Resistor Ohmmeter			In customer place In the laboratory
			calibration is made.
DC Resistor	110 Ω < <i>R</i> ≤ 330 Ω	$22 \cdot 10^{-6}$. $R + 16$ mΩ	R: Measured Resistance, Ω
DC Resistance Meters			Direct Comparison Method with FLUKE 5522A Calibrator
Multimeter Resistor Ohmmeter			In customer place In the laboratory
			calibration is made.
DC Resistor	330 Ω < <i>R</i> ≤ 1,1 kΩ	$21 \cdot 10^{-6}$. $R + 18$ mΩ	R: Measured Resistance, Ω
DC Resistance Meters			Direct Comparison Method with FLUKE 5522A Calibrator
Multimeter Resistor Ohmmeter			In customer place In the laboratory
			calibration is made.
DC Resistor	1,1 kΩ < <i>R</i> ≤ 3,3 kΩ	 $21 \cdot 10^{-6}$. $R + 24 \text{ m}\Omega$	R: Measured Resistance, Ω
DC Resistance Meters			Direct Comparison Method with FLUKE 5522A Calibrator
Multimeter Resistor Ohmmeter			In customer place In the laboratory
			calibration is made.

Annex of the Certificate (Page 56/79) Accreditation Scope



TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

DC Resistor	3,3 kΩ < <i>R</i> ≤ 11 kΩ	21 · 10 ⁻⁶ . <i>R</i> + 0,11 Ω	R : Measured Resistance, Ω
DC Resistance Meters			Direct Comparison Method with FLUKE 5522A Calibrator
Multimeter Resistor Ohmmeter			In customer place In the laboratory
			calibration is made.
DC Resistor	11 kΩ < <i>R</i> ≤ 33 kΩ	$22 \cdot 10^{-6}$. $R + 0.81$ Ω	R: Measured Resistance, Ω
DC Resistance Meters			Direct Comparison Method with FLUKE 5522A Calibrator
Multimeter Resistor Ohmmeter			In customer place In the laboratory
			calibration is made.
DC Resistor	33 kΩ < <i>R</i> ≤ 110 kΩ	21 · 10 ⁻⁶ . <i>R</i> + 1,1 Ω	R : Measured Resistance, Ω
DC Resistance Meters			Direct Comparison Method with FLUKE 5522A Calibrator
Multimeter Resistor Ohmmeter			In customer place In the laboratory
			calibration is made.
DC Resistor	110 kΩ < <i>R</i> ≤ 330 kΩ	$24 \cdot 10^{-6}$. $R + 8,9$ Ω	R: Measured Resistance, Ω
DC Resistance Meters			Direct Comparison Method with FLUKE 5522A Calibrator
Multimeter Resistor Ohmmeter			In customer place In the laboratory
			calibration is made.
DC Resistor	330 kΩ < <i>R</i> ≤ 1,1 MΩ	$12 \cdot 10^{-6}$. $R + 49$ Ω	R: Measured Resistance, Ω
DC Resistance Meters			Direct Comparison Method with FLUKE 5522A Calibrator
Multimeter Resistor Ohmmeter			In customer place In the laboratory
			calibration is made.
DC Resistor	1,1 MΩ < <i>R</i> ≤ 3,3 MΩ	29 · 10 ⁻⁶ . <i>R</i> + 0,3 kΩ	R: Measured Resistance, Ω
DC Resistance Meters			Direct Comparison Method with FLUKE 5522A Calibrator
Multimeter Resistor Ohmmeter			In customer place In the laboratory
			calibration is made.

Annex of the Certificate (Page 57/79) Accreditation Scope



TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

DC Resistor	3,3 MΩ < <i>R</i> ≤ 11 MΩ	67 · 10 ⁻⁶ . <i>R</i> + 0,92 kΩ	R : Measured Resistance, Ω
DC Resistance Meters			Direct Comparison Method with FLUKE 5522A Calibrator
Multimeter Resistor Ohmmeter			In customer place In the laboratory
			calibration is made.
DC Resistor	11 MΩ < <i>R</i> ≤ 33 MΩ	74 · 10 ⁻⁶ . <i>R</i> + 15 kΩ	R: Measured Resistance, Ω
DC Resistance Meters			Direct Comparison Method with FLUKE 5522A Calibrator
Multimeter Resistor Ohmmeter			In customer place In the laboratory
			calibration is made.
DC Resistor	33 MΩ < R ≤ 110 MΩ	$0,14 \cdot 10^{-3}$. $R + 77 \text{ k}\Omega$	R: Measured Resistance, Ω
DC Resistance Meters	IVIX		Direct Comparison Method with FLUKE 5522A Calibrator
Multimeter Resistor Ohmmeter			In customer place In the laboratory
			calibration is made.
DC Resistor	110 MΩ < <i>R</i> ≤ 330 MΩ	2,3 · 10 ⁻³ . <i>R</i> + 43 kΩ	R: Measured Resistance, Ω
DC Resistance Meters	IVIX		Direct Comparison Method with FLUKE 5522A Calibrator
Multimeter Resistor Ohmmeter			In customer place In the laboratory
			calibration is made.
DC Resistor	330 MΩ ≤ <i>R</i> ≤ 1100 MΩ	12 ·10 ⁻³ R + 0,45 MΩ	R: Measured Resistance, Ω
DC Resistance Meters	IVIX		Direct Comparison Method with FLUKE 5522A Calibrator
Multimeter Resistor Ohmmeter			In customer place In the laboratory
			calibration is made.
DC Resistor	1,1 GΩ ≤ R ≤ 2 GΩ	11 mΩ/Ω	R: Measured Resistance, Ω
DC Resistance Meters			Direct Comparison Method with FLUKE 5320A Calibrator
Multimeter Resistor Ohmmeter			In customer place In the laboratory
			calibration is made.

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TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

DC Resistor	1 GΩ ≤ <i>R</i> ≤ 10 GΩ	250 V	8 · 10 ⁻⁴ · R	R: Measured Resistance, Ω
DC Resistance Meters				Direct Comparison Method with Decade Resistance
Insulation Tester				In customer place In the laboratory
				calibration is made.
DC Resistor	$1 \text{ G}\Omega \le R \le 10 \text{ G}\Omega$	500 V	1,1 · 10 ⁻³ · <i>R</i>	R: Measured Resistance, Ω
DC Resistance Meters				Direct Comparison Method with Decade Resistance
Insulation Tester				In customer place In the laboratory
				calibration is made.
DC Resistor	$1 \text{ G}\Omega \le R \le 10 \text{ G}\Omega$	1000 V	1,7 · 10⁻³ · <i>R</i>	R: Measured Resistance, Ω
DC Resistance Meters				Direct Comparison Method with Decade Resistance
Insulation Tester				In customer place In the laboratory
				calibration is made.
DC Resistor	$1 \text{ G}\Omega \le R \le 10 \text{ G}\Omega$	2500 V	3,9 · 10 ⁻³ · <i>R</i>	R: Measured Resistance, Ω
DC Resistance Meters				Direct Comparison Method with Decade Resistance
Insulation Tester				In customer place In the laboratory
				calibration is made.
DC Resistor	$1 \text{ G}\Omega \le R \le 10 \text{ G}\Omega$	5000 V	7,6 · 10 ⁻³ · <i>R</i>	R: Measured Resistance, Ω
DC Resistance Meters				Direct Comparison Method with Decade Resistance
Insulation Tester				In customer place In the laboratory
				calibration is made.
DC Resistor	10 GΩ < <i>R</i> ≤ 100 GΩ	250 V	3,9 · 10 ⁻³ · <i>R</i>	R: Measured Resistance, Ω
DC Resistance Meters				Direct Comparison Method with Decade Resistance
Insulation Tester				In customer place In the laboratory
				calibration is made.

Annex of the Certificate (Page 59/79) Accreditation Scope



TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

			I	1
DC Resistor	10 GΩ < <i>R</i> ≤ 100 GΩ	500 V	4,5 · 10 ⁻³ · <i>R</i>	R: Measured Resistance, Ω
DC Resistance Meters				Direct Comparison Method with Decade Resistance
Insulation Tester				In customer place In the laboratory
				calibration is made.
DC Resistor	10 GΩ < <i>R</i> ≤ 100 GΩ	1000 V	6,3 · 10 ⁻³ · <i>R</i>	R: Measured Resistance, Ω
DC Resistance Meters				Direct Comparison Method with Decade Resistance
Insulation Tester				In customer place In the laboratory
				calibration is made.
DC Resistor	10 GΩ < <i>R</i> ≤ 100 GΩ	2500 V	1,4 · 10⁻² · <i>R</i>	R: Measured Resistance, Ω
DC Resistance Meters				Direct Comparison Method with Decade Resistance
Insulation Tester				In customer place In the laboratory
				calibration is made.
DC Resistor	10 GΩ < <i>R</i> ≤ 100 GΩ	5000 V	2,6 · 10 ⁻² · R	R: Measured Resistance, Ω
DC Resistance Meters				Direct Comparison Method with Decade Resistance
Insulation Tester				In customer place In the laboratory
				calibration is made.
DC Resistor	100 GΩ < <i>R</i> ≤ 1 TΩ	250 V	4,1 · 10⁻³ · <i>R</i>	R: Measured Resistance, Ω
DC Resistance Meters				Direct Comparison Method with Decade Resistance
Insulation Tester				In customer place In the laboratory
				calibration is made.
DC Resistor	100 GΩ < <i>R</i> ≤ 1 TΩ	500 V	4,7 ⋅ 10 ⁻³ ⋅ <i>R</i>	R: Measured Resistance, Ω
DC Resistance Meters				Direct Comparison Method with Decade Resistance
Insulation Tester				In customer place In the laboratory
				calibration is made.

Annex of the Certificate (Page 60/79) Accreditation Scope



TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

<u> </u>				
DC Resistor	100 GΩ < <i>R</i> ≤ 1 TΩ	1000 V	6,4 · 10 ⁻³ · R	R: Measured Resistance, Ω
DC Resistance Meters				Direct Comparison Method with Decade Resistance
Insulation Tester				In customer place In the laboratory
				calibration is made.
DC Resistor	100 GΩ < R ≤ 1 TΩ	2500 V	1,4 · 10 ⁻² · R	R: Measured Resistance, Ω
DC Resistance Meters				Direct Comparison Method with Decade Resistance
Insulation Tester				In customer place In the laboratory
				calibration is made.
DC Resistor	100 GΩ < <i>R</i> ≤ 1 TΩ	5000 V	2,6 · 10 ⁻² · <i>R</i>	R: Measured Resistance, Ω
DC Resistance Meters				Direct Comparison Method with Decade Resistance
Insulation Tester				In customer place In the laboratory
				calibration is made.
DC Resistor	$1 \text{ m}\Omega \leq R \leq 2 \Omega$	4-wire	11 · 10 ⁻⁶ . <i>R</i> + 4 μΩ	R: Measured Resistance, Ω
DC Resistance Standards and Resources				Direct Comparison Method with FLUKE 8508A Reference Multimeter
DC Resistance Standard Resistance Box Calibrator: Resistor				In customer place In the laboratory
DC Resistance Source				calibration is made.
DC Resistor	$2 \Omega < R \le 20 \Omega$	4-wire	7,7 · 10 ⁻⁶ . <i>R</i> + 26 μΩ	R: Measured Resistance, Ω
DC Resistance Standards and Resources				Direct Comparison Method with FLUKE 8508A Reference Multimeter
DC Resistance Standard Resistance Box Calibrator: Resistor				In customer place In the laboratory
DC Resistance Source				calibration is made.
DC Resistor	$20~\Omega < R \leq 200~\Omega$	4-wire	10 μΩ/Ω	R: Measured Resistance, Ω
DC Resistance Standards and Resources				Direct Comparison Method with FLUKE 8508A Reference Multimeter
DC Resistance Standard Resistance Box Calibrator: Resistor DC Resistance Source				In customer place In the laboratory
1.00.010.000				calibration is made.

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De Resistance Standard and Resources CR Resistance Standard Reference Multimeter De Resistance Standard Resources 2 kG < R < 20 kG 4 write 10 µ0/0 Resistance Standard Resources De Resistance Standard Resources De Resistance Standard Resources De Resistance Standard Resources De Resistance Standard Resources De Resistance Standard Resources De Resistance Standard Resistance Standards and Resources De Resistance Standards and Resources De Resistance Standards and Resources De Resistance Standards and Resources De Resistance Standards and Resources De Resistance Standards and Resources De Resistance Standards and Resources De Resistance Standards and Resources De Resistance Standard Resources De Resistance Standards and Resources	DC Resistor	200 Ω < <i>R</i> ≤ 2 kΩ	4-wire	10 μΩ/Ω	R: Measured Resistance, Ω
In the laboratory calibration is made.	DC Resistance Standards and		· wiic		Direct Comparison Method with FLUKE 8508A
DC Resistance Standards and Resource DC Resistance Standards and Resources DC Resistance Standards and Resources DC Resistance Standards Resistance Standards and Resources DC Resistance Standards Resistance Standards and Resources DC Resistance Standards and Resources DC Resistance Standards and Resources DC Resistance Standards and Resources DC Resistance Standards Resistance Standards Resistance Standards Resistance Standard Resources DC Resistance Standard Resistance Standard Resistance Standard Resistance Standard Resistance Standard Resistance Standard Resistance Standard Resistance Standard Resources DC Resistance Standards and Resources DC Resistance Standards Resistance Standards Resources DC Resistance Standards Resistance Resi	Resistance Box				
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Reference Multimeter 1 in customer place 1 in customer place 1 in customer place 1 in customer place 1 in customer place 1 in the laboratory 20 kΩ < R ≤ 200 kΩ 20 kΩ < R ≤ 200 kΩ 20 kΩ < R ≤ 200 kΩ 20 kΩ < R ≤ 200 kΩ 20 kΩ < R ≤ 200 kΩ 20 kΩ < R ≤ 200 kΩ 20 kΩ < R ≤ 200 kΩ 20 kΩ < R ≤ 200 kΩ 20 kΩ < R ≤ 200 kΩ 20 kΩ < R ≤ 200 kΩ 20 kΩ < R ≤ 200 kΩ 20 kΩ < R ≤ 200 kΩ 4-wire or 2-wire 14 μΩ/Ω 21 μΩ/Ω 22 μΩ < R ≤ 200 kΩ 23 μα = 1 μ	DC Resistor	$2 \text{ k}\Omega < R \leq 20 \text{ k}\Omega$	4-wire	10 μΩ/Ω	R: Measured Resistance, Ω
D.C. Resistance Standard Resistance Standard Resistance Standard Resistance Standard Resistance Standards and Resources D.C. Resistance Standards and Resources D.C. Resistance Standards and Resources D.C. Resistance Standards Resistance Standard Resistance Stan					
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Direct Comparison Method with FLUKE 8508A Reference Multimeter In customer place In the laboratory Calibration is made. Direct Comparison Method with FLUKE 8508A Reference Multimeter In the laboratory Calibration is made. DC Resistance Standards and Resources DC Resistance Standards and Resources DC Resistance Standard Resistance Standard Resistance Standard Resistance Standard Resistance Standards and Resources DC Resistance Standards and Resources DC Resistance Standards and Resources DC Resistance Standards and Resources DC Resistance Standards Resistance Standards Resistance Standard	DC Resistance Source				calibration is made.
Reference Multimeter DC Resistance Standard	DC Resistor	20 kΩ < R ≤ 200 kΩ	4-wire	11 μΩ/Ω	R : Measured Resistance, Ω
DC Resistance Standard Resistance Standard Resistance Standard Resistance Source DC Resistance Standard Resistance Standards and Resources DC Resistance Standards and Resource DC Resistance Standards and Resistance Standards and Resource DC Resistance Standards and Resource DC Resistance Standards and Resource DC Resistance Standards and Resource DC Resistance Standards and Resource DC Resistance Standards and Resource DC Resistance Standard Resistance Standard Resistance Source DC Resistance Standard Resistance Standard Resistance Source DC Resistance Standard Resistance Standard Resistance Source DC Resistance Standard Resistance Standard Resistance Source DC Resistance Standard Resistance Standard Resistance Source DC Resistance Standard Resistance Standard Resistance Standard Resistance Standard Resistance Source DC Resistance Standard Resistance Standa					
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DC Resistance Standards and Resources DC Resistance Standard Resistance Box Calibrator. Resistor DC Resistance Standards and Resources DC Resistance Standards and Resource DC Resistance Standards and Resources DC Resistance Standards and Resources DC Resistance Standard Resistance Box Calibrator. Resistor DC Resistance Standard Resources DC Resistance Standard Resistance Standard Resistance Box Calibrator. Resistor DC Resistance Standards and Resources DC Resistance Standard Resource DC Resistance Standard Resource DC Resistance Standard Resource DC Resistance Standard Resource DC Resistance Standard Resource DC Resistance Standard Resource DC Resistance Standard Resource DC Resistance Standard Resource DC Resistance Standard Resource DC Resistance Standard Resource DC Resistance Standard Resource Resistance Box Calibrator. Resistor DC Resistance Box Calibrator. Resistor DC Resistance Standard Resistance Box Calibrator. Resistor DC Resistance Standard Resistance Standard Resistance Box Calibrator. Resistor DC Resistance Standard Resistance Standard Resistance Box Calibrator. Resistor DC Resistance Standard Resi	DC Resistance Source				calibration is made.
Reference Multimeter DC Resistance Standard Resistance Box Calibrator Resistor DC Resistance Source DC Resistor DC Resistance Standards and Resources DC Resistance Standard Resistance Box Calibrator Resistor DC Resistance Standards and Resources DC Resistance Standard Resistance Standard Resources DC Resistance Standard Resistance Source DC Resistance Standard Resistance Standard Resources DC Resistance Standard Resistance Standard Resistance Standard Resources DC Resistance Standard Resistance Standard Resources DC Resistance Standard Resistance Standard Resources DC Resistance Standard Resistance Standard Resources DC Resistance Standard Resistance Row Calibrator Resistor DC Resistance Standard Resistance Row Calibrator Resistor DC Resistance Standard Resistance Box Calibrator Resistor DC Resistance Standard Resistance Row Calibrator Resistor DC Resistance Standard Resistance Standard Resistance Row Calibrator Resistor DC Resistance Standard Resistan	DC Resistor	200 kΩ < <i>R</i> ≤ 2 MΩ	4-wire or 2-wire	14 μΩ/Ω	R: Measured Resistance, Ω
DC Resistance Standard Resistance Box Calibrator: Resistor DC Resistance Source 2 MΩ < R ≤ 20 MΩ 4-wire or 2-wire 16 · 10 · 8. R + 91 Ω R: Measured Resistance, Ω Direct Comparison Method with FLUKE 8508A Reference Multimeter In the laboratory 15 · 10 · 10 · 8. R + 9.7 kΩ R: Measured Resistance, Ω Direct Comparison Method with FLUKE 8508A Reference Multimeter In the laboratory Calibrator: Resistor DC Resistance Standard Resistance Source 20 MΩ < R ≤ 200 MΩ 4-wire or 2-wire 51 · 10 · 8. R + 9.7 kΩ R: Measured Resistance, Ω Direct Comparison Method with FLUKE 8508A Reference Multimeter - In customer place In the laboratory Direct Comparison Method with FLUKE 8508A Reference Multimeter - In customer place In the laboratory - In customer place In the laboratory					
DC Resistor 2 MΩ < R ≤ 20 MΩ 4-wire or 2-wire $16 \cdot 10^6 \cdot R + 91 \Omega$ R: Measured Resistance, Ω DC Resistance Standards and Resources DC Resistance Standard Resistance Box Calibrator. Resistor DC Resistance Source • In customer place • In the laboratory DC Resistance Standards and Resources 20 MΩ < R ≤ 200 MΩ < M ≤ 200 MΩ < M ≤ 200 MΩ < M ≤ 200 MΩ < M ≤ 200 MΩ < M ≤ 200 MΩ < M ≤ 200 MΩ < M ≤ 200 MΩ < M ≤ 200 MΩ < M ≤ 200 MΩ < M ≤ 200 MΩ < M ≤ 200 MΩ < M ≤ 200 MΩ < M ≤ 200 MΩ < M ≤ 200 MΩ < M ≤ 200 MΩ < M ≤ 200 MΩ < M ≤ 200 MΩ	Resistance Box				
DC Resistance Standard Resources DC Resistance Standard Resistor DC Resistance Source DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor DC Resistor DC Resistance Source 20 MΩ < R ≤ 200 MΩ MΩ 4-wire or 2-wire DC Resistance Standards and Resources DC Resistance Standard Resistance Standard Resistance Box Calibrator. Resistor DC Resistance Standard Resistance Standard Resistance Box Calibrator. Resistor DC Resistance Standard Resistance Standard Resistance Box Calibrator. Resistor DC Resistance Standard Resistor DC Resistance Standard Resistor DC Resistance Standard Resistor DC Resistance Standard Resistor DC Resistance Standard Resistor DC Resistance Standard Resistor DC Resistance Standard Resistor					calibration is made.
Resources DC Resistance Standard Resistance Box Calibrator: Resistor DC Resistor DC Resistance Source 20 MΩ < R ≤ 200 MΩ DC Resistance Standards and Resources DC Resistance Standards and Resources DC Resistance Standard	DC Resistor	2 MΩ < R ≤ 20 MΩ	4-wire or 2-wire	16 · 10 ⁻⁶ . <i>R</i> + 91 Ω	R: Measured Resistance, Ω
DC Resistance Standard Resistance Source - In the laboratory - In the laboratory - In the laboratory - In the laboratory - Calibrator Resistance Source - Calibrator is made. - DC Resistor - DC Resistance Standards and Resources - DC Resistance Standard Resistance Standard Resistance Standard Resistance Box - Calibrator: Resistor - DC Resistance Standard Resistor - DC Resistance Source - In the laboratory - In the laboratory - In the laboratory - In the laboratory					
DC Resistance Source calibration is made. DC Resistor 20 MΩ < R ≤ 200 MΩ 4-wire or 2-wire $51 \cdot 10^{-6} \cdot R + 9.7 \text{ kΩ}$ R: Measured Resistance, Ω DC Resistance Standards and Resources Direct Comparison Method with FLUKE 8508A Reference Multimeter • In customer place DC Resistance Box Calibrator: Resistor DC Resistance Source • In the laboratory	Resistance Box				
DC Resistance Standards and Resources DC Resistance Standard Resistance Box Calibrator: Resistor DC Resistance Source DC Resistance Source Direct Comparison Method with FLUKE 8508A Reference Multimeter In customer place In the laboratory					calibration is made.
DC Resistance Standards and Resources DC Resistance Standard Resistance Box Calibrator: Resistor DC Resistance Source Direct Comparison Method with FLUKE 8508A Reference Multimeter In customer place In the laboratory Calibrator: Resistor DC Resistance Source	DC Resistor		4-wire or 2-wire	51 · 10 ⁻⁶ . <i>R</i> + 9,7 kΩ	R : Measured Resistance, Ω
DC Resistance Standard Resistance Box Calibrator: Resistor DC Resistance Source		MΩ			
	Resistance Box Calibrator: Resistor				
	DC Resistance Source				calibration is made.

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

TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

<u> </u>				
DC Resistor	200 MΩ < R ≤ 2 GΩ	4-wire or 2 -wire	0,52 · 10 ⁻³ . <i>R</i> + 1 MΩ	R: Measured Resistance, Ω
DC Resistance Standards and Resources				Direct Comparison Method with FLUKE 8508A Reference Multimeter
DC Resistance Standard Resistance Box Calibrator: Resistor				In customer place In the laboratory
DC Resistance Source				calibration is made.
Capacitance	220 pF ≤ <i>C</i> < 400 pF	10 Hz ≤ <i>f</i> ≤ 10 kHz	3,7 · 10 ⁻³ · <i>C</i> + 9 pF	C: Measured Capacitance, F
Capacitance Meters				f: Frequency, Hz
LCR Meter: Capacitance Multimeter: Capacitance				Direct Comparison Method with FLUKE 5522A
				In customer place In the laboratory
				calibration is made.
Capacitance	0,4 nF ≤ <i>C</i> < 1,1 nF	10 Hz ≤ <i>f</i> ≤ 10 kHz	3,6 · 10 ⁻³ · <i>C</i> + 10 pF	C: Measured Capacitance, F
Capacitance Meters				f: Frequency, Hz
LCR Meter: Capacitance Multimeter: Capacitance				Direct Comparison Method with FLUKE 5522A
				In customer place In the laboratory
				calibration is made.
Capacitance	1,1 nF ≤ <i>C</i> < 3,3 nF	10 Hz ≤ <i>f</i> ≤ 3 kHz	3,9 · 10 ⁻³ · <i>C</i> + 10 pF	C: Measured Capacitance, F
Capacitance Meters				f: Frequency, Hz
LCR Meter: Capacitance Multimeter: Capacitance				Direct Comparison Method with FLUKE 5522A
іминтегет. Сарасітапсе				In customer place
				In the laboratory calibration is made.
Capacitance	3.3 nF ≤ C < 11 nF	10 Hz ≤ <i>f</i> ≤ 1 kHz	1,6 · 10 ⁻³ · <i>C</i> + 17 pF	C: Measured Capacitance, F
Capacitance Meters	3,3111 30 < 11111	TOTIZ 3 / 3 / KIIZ	1,0 10 0 17 μ	f: Frequency, Hz
LCR Meter: Capacitance				Disease Communicate Mask advised FILING FFOOA
Multimeter: Capacitance				Direct Comparison Method with FLUKE 5522A • In customer place
				In the laboratory
				calibration is made.
Capacitance	11 nF ≤ <i>C</i> < 33 nF	10 Hz ≤ <i>f</i> ≤ 1 kHz	1,9 · 10 ⁻³ · <i>C</i> + 92 pF	C: Measured Capacitance, F
Capacitance Meters				f: Frequency, Hz
LCR Meter: Capacitance Multimeter: Capacitance				Direct Comparison Method with FLUKE 5522A
				In customer place In the laboratory
				calibration is made.

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TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Capacitance	33 nF ≤ <i>C</i> < 110 nF	10 Hz ≤ <i>f</i> ≤ 1 kHz	1,5 · 10 ⁻³ · <i>C</i> + 0,21 nF	C: Measured Capacitance, F
Capacitance Meters				f: Frequency, Hz
LCR Meter: Capacitance Multimeter: Capacitance				Direct Comparison Method with FLUKE 5522A
Multimeter. Capacitance				In customer place
				In the laboratory calibration is made.
Capacitance Matera	110nF ≤ <i>C</i> < 330 nF	10 Hz ≤ <i>f</i> ≤ 1 kHz	1,5 · 10 ⁻³ · <i>C</i> + 0,56 nF	C: Measured Capacitance, F
Capacitance Meters				f: Frequency, Hz
LCR Meter: Capacitance Multimeter: Capacitance				Direct Comparison Method with FLUKE 5522A
				In customer placeIn the laboratory
				calibration is made.
Capacitance	0,33 nF ≤ C < 1,1 μF	10 Hz ≤ <i>f</i> ≤ 600 Hz	1,5 · 10 ⁻³ · <i>C</i> + 2 nF	C: Measured Capacitance, F
Capacitance Meters				f: Frequency, Hz
LCR Meter: Capacitance Multimeter: Capaticance				Direct Comparison Method with FLUKE 5522A
Multimeter: Capaticance				In customer place
				In the laboratory
				calibration is made.
Capacitance	1,1 μ F ≤ C < 3,3 μ F	10 Hz ≤ <i>f</i> ≤ 300 Hz	1,5 · 10 ⁻³ · <i>C</i> + 5,6 nF	C: Measured Capacitance, F
Capacitance Meters				f: Frequency, Hz
LCR Meter: Capacitance Multimeter: Capacitance				Direct Comparison Method with FLUKE 5522A
				In customer place In the laboratory
				calibration is made.
Capacitance	3,3 µF ≤ <i>C</i> < 11 µF	10 Hz ≤ <i>f</i> ≤ 150 Hz	1,3 · 10 ⁻³ · <i>C</i> + 26 nF	C: Measured Capacitance, F
Capacitance Meters	5,5 дг 20 ч гг дг	10112272130112	1,5 10 012011	f: Frequency, Hz
LCR Meter: Capacitance Multimeter: Capacitance				Direct Comparison Method with FLUKE 5522A
				In customer placeIn the laboratory
				calibration is made.
Capacitance	11 μF ≤ <i>C</i> < 33 μF	10 Hz ≤ <i>f</i> ≤ 120 Hz	2,3 · 10 ⁻³ · <i>C</i> + 76 nF	C: Measured Capacitance, F
Capacitance Meters				f: Frequency, Hz
LCR Meter: Capacitance Multimeter: Capacitance				Direct Comparison Method with FLUKE 5522A In customer place In the laboratory
				The laboratory

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TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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Capacitance	33 μF ≤ <i>C</i> < 110 μF	10 Hz ≤ <i>f</i> ≤ 80 Hz	2,6 · 10 ⁻³ · <i>C</i> + 0,29 μF	C: Measured Capacitance, F
Capacitance Meters				f: Frequency, Hz
LCR Meter: Capacitance Multimeter: Capacitance				Direct Comparison Method with FLUKE 5522A
wultimeter: Capacitance				In customer place
				In the laboratory
				calibration is made.
Capacitance	110 μF ≤ <i>C</i> < 330 μF	0 Hz ≤ <i>f</i> ≤ 50 Hz	3,1 · 10 ⁻³ · C + 0,49 μF	C: Measured Capacitance, F
Capacitance Meters				f: Frequency, Hz
LCR Meter: Capacitance Multimeter: Capacitance				Direct Comparison Method with FLUKE 5522A
				In customer place In the laboratory
		_		calibration is made.
Capacitance	0,33 mF ≤ C < 1,1	0 Hz ≤ <i>f</i> ≤ 20 Hz	3,0 · 10 ⁻³ · <i>C</i> + 1,8 μF	C: Measured Capacitance, F
Capacitance Meters	mF			f: Frequency, Hz
LCR Meter: Capacitance Multimeter: Capacitance				Direct Comparison Method with FLUKE 5522A
Multimeter: Capacitance				In customer place In the laboratory
				calibration is made.
Capacitance	1,1 mF ≤ C < 3,3 mF	0 Hz ≤ <i>f</i> ≤ 6 Hz	2,8 · 10 ⁻³ · C + 6,7 μF	C: Measured Capacitance, F
Capacitance Meters				f: Frequency, Hz
LCR Meter: Capacitance				Direct Comparison Method with FLUKE 5522A
Multimeter: Capacitance				In customer place In the laboratory
				calibration is made.
Capacitance	3,3 mF ≤ C < 11 mF	0 Hz ≤ <i>f</i> ≤ 2 Hz	3,0 · 10 ⁻³ · C + 18 μF	C: Measured Capacitance, F
Capacitance Meters				f: Frequency, Hz
LCR Meter: Capacitance				Direct Comparison Method with FLUKE 5522A
Multimetre: Capacitance				In customer place In the laboratory
				calibration is made.
Capacitance	11 mF ≤ <i>C</i> < 33 mF	0 Hz ≤ <i>f</i> ≤ 0,6 Hz	4,4 · 10 ⁻³ · <i>C</i> + 0,11 mF	C: Measured Capacitance, F
Capacitance Meters	2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	22 = 7 = 0,0 1.12	.,	f: Frequency, Hz
·				Direct Comparison Method with FLUKE 5522A
LCR Meter: Capacitance Multimeter: capacitcance				In customer place In the laboratory
				calibration is made.
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Annex of the Certificate (Page 65/79) Accreditation Scope



TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

Capacitance	33 mF ≤ C ≤ 110 mF	0 Hz ≤ f ≤ 0,2 Hz	7,5 · 10 ⁻² · <i>C</i> + 0,28 mF	C: Measured Capacitance, F
Capacitance Meters				f: Frequency, Hz
LCR Meter: Capacitance Multimeter: Capacitance				Direct Comparison Method with FLUKE 5522A In customer place In the laboratory
				calibration is made.
AC High Voltage	1 kV ≤ <i>U</i> ≤ 10 kV	60 Hz	0,27 %	U: Measured Voltage, V
AC High Voltage Sources				With High Voltage Divider and Multimeter
				IEC 60060-1
				IEC 60060-2
				IEC 60060-3 • In customer place • In the laboratory
				calibration is made.
DC High Voltage	1 kV < <i>U</i> ≤ 15 kV		0,15 %	U: Measured Voltage, V
DC High Voltage Sources				With High Voltage Divider and Multimeter
				IEC 60060-1
				IEC 60060-2
				IEC 60060-3
				In customer place In the laboratory
				calibration is made.
DC Power and Energy	0,011 W < P ≤ 33 W	3,3 V ≤ <i>U</i> ≤ 1000 V	1,5 · 10 ⁻⁴ · <i>P</i> + 4,7 μW	P: Power, W
Power Meter		3,3 mA ≤ <i>l</i> ≤ 33 mA		<i>U:</i> Voltage, V
Wattmeter				I: Current, A
				Direct measurement method with FLUKE 5522A
				In customer place In the laboratory
				calibration is made.
DC Power and Energy	0,11 W < P ≤ 330 W	$3,3 \text{ V} \le U \le 1000 \text{ V}$ $33 \text{ mA} \le I \le 330 \text{ mA}$	1,4 · 10 ⁻⁴ · <i>P</i> + 49 μW	P: Power, W
Power Meter Wattmeter				U: Voltage, V
				I: Current, A
				Direct measurement method with FLUKE 5522A
				In customer placeIn the laboratory
				calibration is made.
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TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

DC Power and Energy	1,1 W < P ≤ 3000 W	3,3 V ≤ <i>U</i> ≤ 1000 V 330 mA ≤ <i>l</i> ≤ 3 A	4,7 · 10 ⁻⁴ · P + 0,12 mW	P: Power, W
Power Meter		330 IIIA 27 23 A		U : Voltage, V
Wattmeter				I: Current, A
				Direct measurement method with FLUKE 5522A
				In customer placeIn the laboratory
				calibration is made.
DC Power and Energy	9,9 W < P ≤ 11 kW	3,3 V ≤ <i>U</i> ≤ 1000 V 3 A ≤ <i>I</i> ≤ 11 A	1,4 · 10 ⁻³ · <i>P</i> - 5,8 mW	P: Power, W
Power Meter				<i>U</i> : Voltage, V
Wattmeter				I: Current, A
				Direct measurement method with FLUKE 5522A
				In customer placeIn the laboratory
				calibration is made.
DC Power and Energy	33 W < P ≤ 20 kW	3,3 V ≤ <i>U</i> ≤ 1000 V 11 A ≤ <i>I</i> ≤ 20 A	1,2 · 10 ⁻³ · <i>P</i> + 4,7 mW	P: Power, W
Power Meter		11 A 3 / 3 20 A		U : Voltage, V
Wattmeter				I: Current, A
				Direct measurement method with FLUKE 5522A
				In customer placeIn the laboratory
				calibration is made.
AC Power and Energy	0,011 W < P ≤ 33 W	3,3 V ≤ <i>U</i> ≤ 1000 V 3,3 mA ≤ <i>l</i> ≤ 33 mA	1,8 · 10 ⁻³ · P + 0,18 mW	P: Power, W
Active Power: Three Phase		0 ≤ f ≤ 55 Hz PF: 1		U : Voltage, V
Power Meter		FF. I		I: Current, A
Wattmeter				f: Frequency, Hz
				PF : Power Factor
				Direct measurement method with FLUKE 5522A
				In customer placeIn the laboratory
				calibration is made.

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

TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

AC Power and Energy	0,011 W < P ≤ 33 W	$3,3 \text{ V} \le U \le 1000 \text{ V}$ $3,3 \text{ mA} \le I \le 33 \text{ mA}$	1,8 · 10 ⁻³ · <i>P</i> + 0,18 mW	P: Power, W
Active Power: Three Phase		55 Hz ≤ <i>f</i> ≤ 1 kHz PF:1		U: Voltage, V
Power Meter				I: Current, A
Wattmeter				f: Frequency, Hz
				PF: Power Factor
				Direct measurement method with FLUKE 5522A
				In customer place
				In the laboratory
				calibration is made.
AC Power and Energy	0,11 W < <i>P</i> ≤ 330 W	$3,3 \text{ V} \le U \le 1000 \text{ V}$ $33 \text{ mA} \le I \le 330 \text{ mA}$	1,3 · 10 ⁻³ · <i>P</i> + 1,3 mW	P: Power, W
Active Power: Three Phase		0 ≤ <i>f</i> ≤ 55 Hz PF: 1		U: Voltage, V
Power Meter Wattmeter				I: Current, A
wattineter				f: Frequency, Hz
				PF: Power Factor
				Direct measurement method with FLUKE 5522A
				In customer place In the laboratory
				calibration is made.
AC Power and Energy	0,11 W < P ≤ 330 W	3,3 V ≤ <i>U</i> ≤ 1000 V	1,3 · 10 ⁻³ · <i>P</i> + 1,3 mW	P: Power, W
Active Power: Three Phase		33 mA $\leq I \leq$ 330 mA 55 Hz $\leq f \leq$ 1 kHz		<i>U</i> : Voltage, V
Power Meter		PF: 1		I: Current, A
Wattmeter				f: Frequency, Hz
				PF: Power Factor
				Direct measurement method with FLUKE 5522A
				In customer place
				In the laboratory
				calibration is made.
AC Power and Energy	1,1 W < P ≤ 3000 W	$3,3 \text{ V} \le U \le 1000 \text{ V}$ $330 \text{ mA} \le I \le 3 \text{ A}$	7,4 · 10 ⁻³ · <i>P</i> + 65 mW	P: Power, W
Active Power: Three Phase		0 ≤ <i>f</i> ≤ 55 Hz PF: 1		U: Voltage, V
Power Meter Wattmeter				I: Current, A
watunetei				f: Frequency, Hz
				PF: Power Factor
				Direct measurement method with FLUKE 5522A
				In customer placeIn the laboratory
				calibration is made.

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TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

AC Power and Energy Active Power: Three Phase Power Meter Wattmeter	1,1 W < P ≤ 3000 W	3,3 V ≤ <i>U</i> ≤ 1000 V 330 mA ≤ <i>I</i> ≤ 3 A 55 Hz ≤ <i>f</i> ≤ 1 kHz PF: 1	7,4 · 10 ⁻³ · <i>P</i> + 65 mW	P: Power, W U: Voltage, V I: Current, A f: Frequency, Hz PF: Power Factor Direct measurement method with FLUKE 5522A • In customer place
AC Power and Energy Active Power: Three Phase	9,5 W < P ≤ 11000 W	3,3 V ≤ <i>U</i> ≤ 1000 V 3 A ≤ <i>I</i> ≤ 11 A 0 Hz ≤ <i>f</i> ≤ 55 Hz PF: 1	1,6 · 10 ⁻² · <i>P</i> + 0,42 W	• In the laboratory calibration is made. P: Power, W U: Voltage, V I: Current, A
Power Meter Wattmeter				f: Frequency, Hz PF: Power Factor Direct measurement method with FLUKE 5522A In customer place In the laboratory
AC Power and Energy Active Power: Three Phase Power Meter Wattmeter	9,5 W < P ≤ 11000 W	3,3 V ≤ <i>U</i> ≤ 1000 V 3 A ≤ <i>I</i> ≤ 11 A 55 Hz ≤ <i>f</i> ≤ 1 kHz PF: 1	1,6 · 10 ⁻² · P + 0,42 W	calibration is made. P: Power, W U: Voltage, V I: Current, A f: Frequency, Hz PF: Power Factor
				Direct measurement method with FLUKE 5522A In customer place In the laboratory calibration is made.
AC Power and Energy Active Power: Three Phase Power Meter Wattmeter	36,3 W < P ≤ 20 kW	3,3 V ≤ U ≤ 1000 V 11 A ≤ I ≤ 20 A 0 Hz ≤ f ≤ 55 Hz PF: 1	8,6 · 10 ⁻³ · P + 0,26 W	P: Power, W U: Voltage, V I: Current, A f: Frequency, Hz PF: Power Factor Direct measurement method with FLUKE 5522A In customer place In the laboratory calibration is made.

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TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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

AC Power and Energy Active Power: Three Phase Power Meter Wattmeter	36,3 W < P ≤ 20 kW	3,3 V ≤ <i>U</i> ≤ 1000 V 11 A ≤ <i>I</i> ≤ 20 A 55 Hz ≤ <i>f</i> ≤ 1 kHz PF: 1	8,6 · 10 ⁻³ · <i>P</i> + 0,26 W	P: Power, W U: Voltage, V I: Current, A f: Frequency, Hz PF: Power Factor Direct measurement method with FLUKE 5522A In customer place In the laboratory calibration is made.
Signal and Pulse Characteristics Vertical Deflection (Gain) Oscilloscope	1 mV ≤ <i>U</i> < 5 V	DC 50 Ω - 1 MΩ	3,5 · 10 ^{·3} · <i>U</i> + 22 μV	U: Measured voltage, V Direct measurement method with FLUKE 9500B In customer place In the laboratory calibration is made.

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TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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

Calibration and Measurement Capability (CMC)

Magnetic Quantities

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
DC Magnetic Flux Density and Intensity	0 G ≤ H ≤ 100 G	Analogue Horizontal / Vertical	1,4 · 10 ⁻⁴ · H + 0,6 G	H: Measured Magnetic Field Comparison method with automatic Helmholtz calibration system
Magnetic Field Intensity Meter				
DC Magnetic Flux Density and Intensity	0 G ≤ H ≤ 100 G	Analoque Horizontal / Vertical	7,8 · 10 ⁻³ · H + 0,002 G	H: Measured Magnetic Field Comparison method with automatic Helmholtz calibration system
Magnetic Field Intensity Meter				

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TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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

Calibration and Measurement Capability (CMC)

Mass (Mass Standards)

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
Weight Standard 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.
Weight Standard 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.
Weight Standard 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.
Weight Standard 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.
Weight Standard 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.
Weight Standard 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.
Weight Standard 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.
Weight Standard 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.
Weight Standard 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.
Weight Standard 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.
Weight Standard 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.

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

TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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

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

TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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

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

TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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

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TÜRKAK 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

Weight Standard 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. Calibration is done in the laboratory.	
Weight Standard 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. • Calibration is done in the laboratory.	
Weight Standard 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. • Calibration is done in the laboratory.	
Weight Standard 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. Calibration is done in the laboratory.	
Weight Standard 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. Calibration is done in the laboratory.	
Weight Standard 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. Calibration is done in the laboratory.	
Weight Standard 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. Calibration is done in the laboratory.	

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TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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

Calibration and Measurement Capability (CMC)

Weighing Tools

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method	
Non-automatic Weighing Devices Scales	1 mg < <i>m</i> < 10000 g	With Class E2 mass	2,2 · 10 · 6	m: Weight value (g) Calibration procedure prepared in accordance with the EURAMET/cg-18 document Where the device is used	
Non-automatic Weighing Devices Scales	1 g < <i>m</i> < 50 kg	With Class F1 mass	6,9 · 10 ⁻⁶	m : Weight value (g) Calibration procedure prepared in accordance with the EURAMET/cg-18 document Where the device is used	
Non-automatic Weighing Devices Scales	10 kg < <i>m</i> < 1000 kg	With Class M1 mass	6,9 · 10 ⁻⁵	m : Weight value (kg) Calibration procedure prepared in accordance with the EURAMET/cg-18 document Where the device is used	

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TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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

Calibration and Measurement Capability (CMC)

Material Testing Machines

Measured Quantity / Range Calibrated Items		Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
Material Testing Machines Tensile / Compression Testing Machine	0,45 kN < <i>F</i> < 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 Customer premises Mobile or temporary premises
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 Customer premises Mobile or temporary premises

Annex of the Certificate (Page 78/79) Accreditation Scope



TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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

Calibration and Measurement Capability (CMC)

Torque

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method		
Torque Measurement Devices 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. Customer premises Laboratory Mobile or temporary premises		

Annex of the Certificate (Page 79/79) Accreditation Scope



TÜRK HAVA YOLLARI TEKNİK ANONİM ŞİRKETİ

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

Calibration and Measurement Capability (CMC)

Optical Quantities

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
Optical Sensitivity Luxmeter	0 lx ≤ E _v ≤ 5000 lx	2856 K Comparison with reference	1,0 %	E _v : Measured lux Calibration procedure prepared basedt: ISO/CIE 19476
				Customer premises Laboratory Mobile or temporary premises
Luminance Responsivity Luminance meter	120 cd/m2 ≤ L _v ≤ 1214 cd/m2	2856 K colour temperature	2,7 %	L _v : Luminance Responsivity Calibration procedure in accordance with: ISO/CIE 19476
				Customer premisesLaboratoryMobile or temporary premises
Responsivity, UV, Broadband irradiance UVA Radiometer	$0,015 \text{ W/m}^2 \le E_e \le 100 \text{ W/m}^2$	UV-A range	5,3 %	E _e : Irradiance Responsivity Calibration procedure in accordance with: CIE 220
				Customer premisesLaboratoryMobile or temporary premises