TURKISH ACCREDITATION AGENCY

ACCREDITATION CERTIFICATE

As a Calibration Laboratory

UMS ANKARA KALİBRASYON MÜHENDİSLİK MÜŞAVİRLİK MÜMESSİLLİK SANAYİ VE TİCARET LİMİTED ŞİRKETİ

Central Address: OSTİM OSB MAH. 1267/1 SK. No:5/ YENİMAHALLE/ANKARA Ankara / 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-0012-K

Accreditation Date : 30.11.2004

Revision Date / Number : 15.04.2026 / 23

This certificate shall remain in force until 16.12.2029, subject to continuing compliance with the standard TS EN ISO/IEC 17025:2017, related regulations and requirements.

Gülden Banu Müderrisoğlu
Secretary General

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

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

Calibration
TS EN ISO/IEC 17025
AB-0012-K

UMS ANKARA KALİBRASYON MÜHENDİSLİK MÜŞAVİRLİK MÜMESSİLLİK SANAYİ VE TİCARET LİMİTED ŞİRKETİ

Accreditation Nr : AB-0012-K
Revision Nr: 23 Date: 15.04.2026

Calibration Laboratory

Address :
OSTİM OSB MAH. 1267/1 SK. No:5/ YENİMAHALLE/ANKARA Ankara / Türkiye

Phone : +90 312 385 5078
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Calibration and Measurement Capability (CMC)

Temperature

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
Resistance Thermometers • Platinum Resistance Thermometers (PRT) • Industrial Platinum Resistance Thermometers (PRT) • Thermistor • Transmitters	0 °C	Ice Point	0,03 °C	Calibration is performed according to the calibration procedure prepared in accordance with the EN 60751 ve DKD R5-1 document. • Carried out in laboratory or in customer's site
Resistance Thermometers • Platinum Resistance Thermometers (PRT) • Industrial Platinum Resistance Thermometers (PRT) • Thermistor • Transmitters	-40 °C ≤ *T* ≤ 80 °C	Liquid Bath	0,08 °C	Calibration is performed according to the calibration procedure prepared in accordance with the EN 60751 ve DKD R5-1 document. • Carried out in laboratory or in customer's site
Resistance Thermometers • Platinum Resistance Thermometers (PRT) • Industrial Platinum Resistance Thermometers (PRT) • Thermistor • Transmitters	80 °C < *T* ≤ 250 °C	Liquid Bath	0,12 °C	Calibration is performed according to the calibration procedure prepared in accordance with the EN 60751 ve DKD R5-1 document. • Carried out in laboratory or in customer's site
Resistance Thermometers • Platinum Resistance Thermometers (PRT) • Industrial Platinum Resistance Thermometers (PRT) • Thermistor • Transmitters	-90 °C ≤ *T* ≤ 0 °C	Block Calibrator	0,10 °C	Calibration is performed according to the calibration procedure prepared in accordance with the EN 60751 ve DKD R5-1 document. • Carried out in laboratory
Resistance Thermometers • Platinum Resistance Thermometers (PRT) • Industrial Platinum Resistance Thermometers (PRT) • Thermistor • Transmitters	-35 °C ≤ *T* ≤ 150 °C	Block Calibrator	0,12 °C	Calibration is performed according to the calibration procedure prepared in accordance with the EN 60751 ve DKD R5-1 document. • Carried out in laboratory or in customer's site
Resistance Thermometers • Platinum Resistance Thermometers (PRT) • Industrial Platinum Resistance Thermometers (PRT) • Thermistor • Transmitters	50 °C ≤ *T* ≤ 400 °C	Block Calibrator	0,20 °C	Calibration is performed according to the calibration procedure prepared in accordance with the EN 60751 ve DKD R5-1 document. • Carried out in laboratory or in customer's site
Thermocouples Industrial Thermocouples	0 °C	Ice Point	0,10 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site • (except type B at negative temperatures)

Accreditation Scope

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Thermocouples Industrial Thermocouples	-40 °C ≤ *T* ≤ 80 °C	Liquid Bath	0,16 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site • (except type B at negative temperatures)
Thermocouples Industrial Thermocouples	80 °C < *T* ≤ 250 °C	Liquid Bath	0,33 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site • (except type B at negative temperatures)
Thermocouples Industrial Thermocouples	-90 °C ≤ *T* ≤ 0 °C	Block Calibrator	0,19 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory • (except type B at negative temperatures)
Thermocouples Industrial Thermocouples	-35 °C ≤ *T* ≤ 150 °C	Block Calibrator	0,25 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site • (except type B at negative temperatures)
Thermocouples Industrial Thermocouples	50 °C ≤ *T* ≤ 400 °C	Block Calibrator	0,50 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site • (except type B at negative temperatures)
Thermocouples Industrial Thermocouples	400 °C < *T* ≤ 600 °C	Block Calibrator	1,5 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site • (except type B at negative temperatures)
Thermocouples Industrial Thermocouples	600 °C < *T* ≤ 1100 °C	Block Calibrator	2,2 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site • (except type B at negative temperatures)
Liquid-in-glass Thermometer	0 °C	Ice Point	0,03 °C	For glass thermometers with 0.05 °C division and above calibration is performed using the comparison method. • Carried out in laboratory
Liquid-in-glass Thermometer	-40 °C ≤ *T* ≤ 80 °C	Liquid Bath	0,09 °C	For glass thermometers with 0.05 °C division and above calibration is performed using the comparison method. • Carried out in laboratory

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Liquid-in-glass Thermometer	80 °C < *T* ≤ 250 °C	Liquid Bath	0,12 °C	For glass thermometers with 0.05 °C division and above calibration is performed using the comparison method. • Carried out in laboratory
Temperature Meters With Indicator Thermistor Resistance Transmitter	0 °C	Ice Point	0,03 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with the EN 60751 ve DKD R5-1 documents. • Carried out in laboratory or in customer's site
Temperature Meters With Indicator Thermistor Resistance Transmitter	-40 °C ≤ *T* ≤ 80 °C	Liquid Bath	0,08°C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with the EN 60751 ve DKD R5-1 documents. • Carried out in laboratory or in customer's site
Temperature Meters With Indicator Thermistor Resistance Transmitter	80 °C < *T* ≤ 250 °C	Liquid Bath	0,12 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with the EN 60751 ve DKD R5-1 documents. • Carried out in laboratory or in customer's site
Temperature Meters With Indicator Thermistor Resistance Transmitter	-90 °C ≤ *T* ≤ 0 °C	Block Calibrator	0,10 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with the EN 60751 ve DKD R5-1 documents. • Carried out in laboratory
Temperature Meters With Indicator Thermistor Resistance Transmitter	-35 °C ≤ *T* ≤ 150 °C	Block Calibrator	0,12 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with the EN 60751 ve DKD R5-1 documents. • Carried out in laboratory or in customer's site
Temperature Meters With Indicator Thermistor Resistance Transmitter	50 °C ≤ *T* ≤ 400 °C	Block Calibrator	0,20 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with the EN 60751 ve DKD R5-1 documents. • Carried out in laboratory or in customer's site
Temperature Meters With Indicator Thermocouple Sensor (Base Metal T,E,J,K,N Type) Transmitter	0 °C	Ice Point	0,26 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site
Temperature Meters With Indicator Thermocouple Sensor (Base Metal T,E,J,K,N Type) Transmitter	-40 °C ≤ *T* ≤ 80 °C	Liquid Bath	0,28 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site
Temperature Meters With Indicator Thermocouple Sensor (Base Metal T,E,J,K,N Type) Transmitter	80 °C < *T* ≤ 250 °C	Liquid Bath	0,40 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site

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Temperature Meters With Indicator Thermocouple Sensor (Base Metal T,E,J,K,N Type) Transmitter	-90 °C ≤ *T* ≤ 0 °C	Block Calibrator	0,28 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory
Temperature Meters With Indicator Thermocouple Sensor (Base Metal T,E,J,K,N Type) Transmitter	-35 °C ≤ *T* ≤ 150 °C	Block Calibrator	0,40 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site
Temperature Meters With Indicator Thermocouple Sensor (Base Metal T,E,J,K,N Type) Transmitter	50 °C ≤ *T* ≤ 400 °C	Block Calibrator	0,60 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site
Temperature Meters With Indicator Thermocouple Sensor (Base Metal T,E,J,K,N Type) Transmitter	400 °C < *T* ≤ 600 °C	Block Calibrator	1,5 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site
Temperature Meters With Indicator Thermocouple Sensor (Base Metal T,E,J,K,N Type) Transmitter	600 °C < *T* ≤ 1100 °C	Block Calibrator	3,0 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site
Temperature Meters With Indicator Thermocouple Sensor (Noble Metal R, S Type) Transmitter	0 °C	Ice Point	0,26 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site
Temperature Meters With Indicator Thermocouple Sensor (Noble Metal R, S Type) Transmitter	-40 °C ≤ *T* ≤ 80 °C	Liquid Bath	0,26 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site
Temperature Meters With Indicator Thermocouple Sensor (Noble Metal R, S Type) Transmitter	80 °C < *T* ≤ 250 °C	Liquid Bath	0,30 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site
Temperature Meters With Indicator Thermocouple Sensor (Noble Metal R, S Type) Transmitter	-50 °C ≤ *T* ≤ 0 °C	Block Calibrator	0,26 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory
Temperature Meters With Indicator Thermocouple Sensor (Noble Metal R, S Type) Transmitter	-35 °C ≤ *T* ≤ 150 °C	Block Calibrator	0,40 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site

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Temperature Meters With Indicator Thermocouple Sensor (Noble Metal R, S Type) Transmitter	50 °C ≤ *T* ≤ 400 °C	Block Calibrator	0,40 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site
Temperature Meters With Indicator Thermocouple Sensor (Noble Metal R, S Type) Transmitter	400 °C < *T* ≤ 600 °C	Block Calibrator	1,5 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site
Temperature Meters With Indicator Thermocouple Sensor (Noble Metal R, S Type) Transmitter	600 °C < *T* ≤ 1100 °C	Block Calibrator	2,2 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site
Temperature Meters With Indicator Thermocouple Sensor (Noble Metal B Type) Transmitter	600 °C ≤ *T* ≤ 1100 °C	Block Calibrator	2,2 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.8, EN 60584 and DKD R5-3 documents. • Carried out in laboratory or in customer's site
Hygrometers Dew Point Meter Hygrometer Relative Humidity Meter (Capacitive, resistive, thermograph, mechanical, wet/dry chamber) Relative Humidity Meter (Datalogger) Relative Humidity Meter (Digital/Analog) Moisture Meter Humidity Transmitter	10 %rh ≤ *RH* ≤ 95 %rh	15 °C ≤ *T* ≤ 35 °C	2,0 %rh	Calibration is performed by using the comparison method with the reference Pt100 and temperature humidity meter in the humidity chamber according to the calibration procedure prepared in accordance with the DKD-R 5-8 document. • Carried out in laboratory
Hygrometers Hygrometer Relative Humidity Meter (Capacitive, resistive, thermograph, mechanical, wet/dry chamber) Relative Humidity Meter (Datalogger) Relative Humidity Meter (Digital/Analog) Moisture Meter Temperature Transmitter	10 °C ≤ *T* ≤ 50 °C	30 %rh ≤ *RH* ≤ 60 %rh	0,20 °C	Calibration is performed by using the comparison method with the reference Pt100 and temperature humidity meter in the humidity chamber according to the calibration procedure prepared in accordance with the DKD-R 5-8 document. • Carried out in laboratory
Hygrometers Dew Point Meter Hygrometer Relative Humidity Meter (Capacitive, resistive, thermograph, mechanical, wet/dry chamber) Relative Humidity Meter (Datalogger) Relative Humidity Meter (Digital/Analog) Moisture Meter Humidity Transmitter	10 %rh ≤ *RH* ≤ 95 %rh	15 °C ≤ *T* ≤ 35 °C	1,5 %rh	Calibration is performed by using the comparison method with the reference psychometric sensor in the humidity chamber according to the calibration procedure prepared in accordance with the DKD-R 5-8 document. • Carried out in laboratory

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Hygrometers Dew Point Meter Hygrometer Relative Humidity Meter (Capacitive, resistive, thermograph, mechanical, wet/dry chamber) Relative Humidity Meter (Datalogger) Relative Humidity Meter (Digital/Analog) Moisture Meter Temperature Transmitter	10 °C ≤ *T* ≤ 50 °C	30 %rh ≤ *RH* ≤ 60 %rh	0,17 °C	Calibration is performed by using the comparison method with the reference psychometric sensor in the humidity chamber according to the calibration procedure prepared in accordance with the DKD-R 5-8 document. • Carried out in laboratory
Hygrometers Ambient Thermometer	50 °C < *T* ≤ 80 °C	With Resistance Sensor thermometer	0,60 °C	Calibration was performed according to the calibration procedure prepared in accordance with the DKD-R 5-8 document. • Carried out in laboratory
Temperature Indicators and Calibrators Temperature Indicators Cold Junction ON	600 °C ≤ *T* ≤ 1820 °C	Type B	0,49 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction OFF	600 °C ≤ *T* ≤ 1820 °C	Type B	0,45 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction ON	0 °C ≤ *T* ≤ 1767 °C	Type S	0,49 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction OFF	0 °C ≤ *T* ≤ 1767 °C	Type S	0,45 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction ON	0 °C ≤ *T* ≤ 1767 °C	Type R	0,47 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction OFF	0 °C ≤ *T* ≤ 1767 °C	Type R	0,44 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site

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Temperature Indicators and Calibrators Temperature Indicators Cold Junction ON	-200 °C ≤ *T* ≤ 1372 °C	Type K	0,22 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction OFF	-200 °C ≤ *T* ≤ 1372 °C	Type K	0,21 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction ON	-200 °C ≤ *T* ≤ 1300 °C	Type N	0,21 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction OFF	-200 °C ≤ *T* ≤ 1300 °C	Type N	0,20 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction ON	-210 °C ≤ *T* ≤ 1200 °C	Type J	0,20 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction OFF	-210 °C ≤ *T* ≤ 1200 °C	Type J	0,19 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction ON	-250 °C ≤ *T* ≤ 400 °C	Type T	0,19 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction OFF	-250 °C ≤ *T* ≤ 400 °C	Type T	0,18 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction ON	-250 °C ≤ *T* ≤ 1000 °C	Type E	0,19 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site

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Temperature Indicators and Calibrators Temperature Indicators Cold Junction OFF	-250 °C ≤ *T* ≤ 1000 °C	Type E	0,18 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators	-200 °C ≤ *T* ≤ 850 °C	Type PT100	0,05 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction ON Temperature Calibrator	600 °C ≤ *T* ≤ 1820 °C	Type B	0,34 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction OFF Temperature Calibrator	600 °C ≤ *T* ≤ 1820 °C	Type B	0,28 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction ON Temperature Calibrator	0 °C ≤ *T* ≤ 1767 °C	Type S	0,34 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction OFF Temperature Calibrator	0 °C ≤ *T* ≤ 1767 °C	Type S	0,27 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction ON Temperature Calibrator	0 °C ≤ *T* ≤ 1767 °C	Type R	0,29 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction OFF Temperature Calibrator	0 °C ≤ *T* ≤ 1767 °C	Type R	0,24 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site

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Temperature Indicators and Calibrators Temperature Indicators Cold Junction ON Temperature Calibrator	-200 °C ≤ *T* ≤ 1372 °C	Type K	0,15 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction OFF Temperature Calibrator	-200 °C ≤ *T* ≤ 1372 °C	Type K	0,13 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction ON Temperature Calibrator	-200 °C ≤ *T* ≤ 1300 °C	Type N	0,13 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction OFF Temperature Calibrator	-200 °C ≤ *T* ≤ 1300 °C	Type N	0,11 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction ON Temperature Calibrator	-210 °C ≤ *T* ≤ 1200 °C	Type J	0,11 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction OFF Temperature Calibrator	-210 °C ≤ *T* ≤ 1200 °C	Type J	0,10 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction ON Temperature Calibrator	-250 °C ≤ *T* ≤ 400 °C	Type T	0,10 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction OFF Temperature Calibrator	-250 °C ≤ *T* ≤ 400 °C	Type T	0,09 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site

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Temperature Indicators and Calibrators Temperature Indicators Cold Junction ON Temperature Calibrator	-250 °C ≤ *T* ≤ 1000 °C	Type E	0,09 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Cold Junction OFF Temperature Calibrator	-250 °C ≤ *T* ≤ 1000 °C	Type E	0,09 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Temperature Calibrator	-200 °C ≤ *T* < 0 °C	Type PT100	0,02 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Temperature Indicators and Calibrators Temperature Indicators Temperature Calibrator	0 °C ≤ *T* ≤ 650 °C	Type PT100	0,05 °C	Calibration is performed using the electrical simulation method according to the calibration procedure prepared in accordance with the EURAMET cg.11 document. • Carried out in laboratory or in customer's site
Controlled Volumes (Temperature Distribution) Oven Incubator Cold Room (Deep Freezer etc.) Climate Chamber Sterilizer (Autoclave) Muffle Furnace	-90 °C ≤ *T* ≤ 80 °C	Temperature distribution inside the cabin, With reference thermocouple sensor thermometer	0,70 °C	Calibration is performed with the portable calibration system according to the calibration procedure prepared in accordance with EURAMET cg.20, DKD-R 5-7 and EN 60068 documents., • Carried out in laboratory or in customer's site
Controlled Volumes (Temperature Distribution) Oven Incubator Cold Room (Deep Freezer etc.) Climate Chamber Sterilizer (Autoclave) Muffle Furnace	80 °C < *T* ≤ 140 °C	Temperature distribution inside the cabin, With reference thermocouple sensor thermometer	1,0 °C	Calibration is performed with the portable calibration system according to the calibration procedure prepared in accordance with EURAMET cg.20, DKD-R 5-7 and EN 60068 documents., • Carried out in laboratory or in customer's site
Controlled Volumes (Temperature Distribution) Oven Incubator Cold Room (Deep Freezer etc.) Climate Chamber Sterilizer (Autoclave) Muffle Furnace	140 °C < *T* ≤ 200 °C	Temperature distribution inside the cabin, With reference thermocouple sensor thermometer	1,4 °C	Calibration is performed with the portable calibration system according to the calibration procedure prepared in accordance with EURAMET cg.20, DKD-R 5-7 and EN 60068 documents., • Carried out in laboratory or in customer's site
Controlled Volumes (Temperature Distribution) Oven Incubator Climate Chamber Sterilizer (Autoclave)	200 °C < *T* ≤ 250 °C	Temperature distribution inside the cabin, With reference thermocouple sensor thermometer	1,8 °C	Calibration is performed with the portable calibration system according to the calibration procedure prepared in accordance with EURAMET cg.20, DKD-R 5-7 and EN 60068 documents., • Carried out in laboratory or in customer's site

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Controlled Volumes (Temperature Distribution) Oven Incubator Cold Room (Deep Freezer etc.) Climate Chamber Sterilizer (Autoclave)	-90 °C ≤ *T* ≤ 80 °C	Point temperature inside the cabin With reference thermocouple sensor thermometer	0,50 °C	Calibration is performed with the portable calibration system according to the calibration procedure prepared in accordance with EURAMET cg.20, DKD-R 5-7 and EN 60068 documents., • Carried out in laboratory or in customer's site
Controlled Volumes (Temperature Distribution) Oven Incubator Climate Chamber Sterilizer (Autoclave)	80 °C < *T* ≤ 140 °C	Point temperature inside the cabin With reference thermocouple sensor thermometer	0,70 °C	Calibration is performed with the portable calibration system according to the calibration procedure prepared in accordance with EURAMET cg.20, DKD-R 5-7 ve EN 60068 documents., • Carried out in laboratory or in customer's site
Controlled Volumes (Temperature Distribution) Oven Incubator Climate Chamber Sterilizer (Autoclave)	140 °C < *T* ≤ 200 °C	Point temperature inside the cabin With reference thermocouple sensor thermometer	0,90 °C	Calibration is performed with the portable calibration system according to the calibration procedure prepared in accordance with EURAMET cg.20, DKD-R 5-7 ve EN 60068 documents., • Carried out in laboratory or in customer's site
Controlled Volumes (Temperature Distribution) Oven Incubator Climate Chamber Sterilizer (Autoclave)	200 °C < *T* ≤ 250 °C	Point temperature inside the cabin With reference thermocouple sensor thermometer	1,1 °C	Calibration is performed with the portable calibration system according to the calibration procedure prepared in accordance with EURAMET cg.20, DKD-R 5-7 and EN 60068 documents., • Carried out in laboratory or in customer's site
Controlled Volumes (Temperature Distribution) Oven Incubator Cold Room (Deep Freezer etc.) Climate Chamber Sterilizer (Autoclave)	-90 °C ≤ *T* ≤ 80 °C	Temperature distribution inside the cabin, With reference resistance sensor thermometer	0,50 °C	Calibration is performed with the portable calibration system according to the calibration procedure prepared in accordance with EURAMET cg.20, DKD-R 5-7 ve EN 60068 documents., • Carried out in laboratory or in customer's site
Controlled Volumes (Temperature Distribution) Oven Incubator Climate Chamber Sterilizer (Autoclave)	80 °C < *T* ≤ 250 °C	Temperature distribution inside the cabin, With reference resistance sensor thermometer	0,70 °C	Calibration is performed with the portable calibration system according to the calibration procedure prepared in accordance with EURAMET cg.20, DKD-R 5-7 ve EN 60068 documents., • Carried out in laboratory or in customer's site
Controlled Volumes (Temperature Distribution) Oven Incubator Climate Chamber Sterilizer (Autoclave)	-90 °C ≤ *T* ≤ 400 °C	Point temperature inside the cabin With reference resistance sensor thermometer	0,20 °C	Calibration is performed with the portable calibration system according to the calibration procedure prepared in accordance with EURAMET cg.20, DKD-R 5-7 ve EN 60068 documents., • Carried out in laboratory or in customer's site
Controlled Volumes (Relative Humidity Distribution) Climate Chamber	10 %rh ≤ *RH* ≤ 90 %rh	Central Humidity (15 °C ≤ *T* ≤ 35 °C) Ambient	3,0 %rh	Calibration is performed with the portable calibration system according to the calibration procedure prepared in accordance with EURAMET cg.20 documents., • Carried out in laboratory or in customer's site

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Controlled Volumes (Relative Humidity Distribution) Climate Chamber	10 %rh ≤ *RH* ≤ 95 %rh	Central Humidity (5 °C ≤ *T* ≤ 85 °C) Ambient	2,0 %rh	Calibration is performed with the portable calibration system according to the calibration procedure prepared in accordance with EURAMET cg.20 documents., (With Psychometric Sensor) • Carried out in laboratory or in customer's site
Controlled Volumes (Temperature Distribution) Autoclave, Steam Steriliser, Vacuum Etuve	30 °C ≤ *T* ≤ 140 °C	With Datalogger Temperature Measurement	0,3 °C	With portable calibration system • Carried out in laboratory or in customer's site
Controlled Volumes (Temperature Distribution) Autoclave, Steam Steriliser, Vacuum Etuve	30 °C ≤ *T* ≤ 140 °C	With Datalogger Temperature Measurement	0,042 bar	With portable calibration system • Carried out in laboratory or in customer's site
Controlled Volumes (Temperature Distribution) Muffle Furnace	100 °C ≤ *T* ≤ 1400 °C	Axial Temperature Distribution	4,5 °C	With portable calibration system • Carried out in laboratory or in customer's site
Dry Block Calibrators	-90 °C ≤ *T* ≤ 400 °C	Homogeneity, Stability Indicator Deviation	0,4 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.13 documents. • Carried out in laboratory or in customer's site
Dry Block Calibrators	400 °C < *T* ≤ 1100 °C	Homogeneity, Stability Indicator Deviation	2,3 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.13 documents. • Carried out in laboratory or in customer's site
Dry Block Calibrators	1100 °C < *T* ≤ 1400 °C	Homogeneity, Stability Indicator Deviation	4,5 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with EURAMET cg.13 documents. • Carried out in laboratory or in customer's site
Industrial Radiation Thermometers Pyrometer IR Thermometer	20 °C ≤ *T* ≤ 250 °C	With IR Calibrator	2,1 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with ASTM E2847 documents. • Carried out in laboratory or in customer's site
Industrial Radiation Thermometers Pyrometer IR Thermometer	250 °C < *T* ≤ 400 °C	With IR Calibrator	3,2 °C	Calibration is performed using the comparison method according to the calibration procedure prepared in accordance with ASTM E2847 documents. • Carried out in laboratory or in customer's site
Industrial Radiation Thermometers Pyrometer IR Thermometer	50 °C ≤ *T* ≤ 600 °C	With IR Calibrator (Cavity)	3,2 °C	Calibration was performed according to the calibration procedure prepared in accordance with the ASTM E2847 document. Using the comparison method • Carried out in laboratory or in customer's site

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Industrial Radiation Thermometers Pyrometer IR Thermometer	600 °C < *T* ≤ 1000 °C	With IR Calibrator (Cavity)	6,0 °C	Calibration was performed according to the calibration procedure prepared in accordance with the ASTM E2847 document. Using the comparison method • Carried out in laboratory or in customer's site
Industrial Radiation Thermometers Pyrometer IR Thermometer	1000 °C < *T* ≤ 1200 °C	With IR Calibrator (Cavity)	7,5 °C	Calibration was performed according to the calibration procedure prepared in accordance with the ASTM E2847 document. Using the comparison method • Carried out in laboratory or in customer's site
Other Thermometers Surface Thermometers	20 °C ≤ *T* ≤ 50 °C	With Surface Temperature Calibrator	0,5 °C	Calibration is performed using the comparison method. • Carried out in laboratory
Other Thermometers Surface Thermometers	50 °C < *T* ≤ 100 °C	With Surface Temperature Calibrator	0,8 °C	Calibration is performed using the comparison method. • Carried out in laboratory
Other Thermometers Surface Thermometers	100 °C < *T* ≤ 150 °C	With Surface Temperature Calibrator	1,1 °C	Calibration is performed using the comparison method. • Carried out in laboratory
Other Thermometers Surface Thermometers	150 °C < *T* ≤ 200 °C	With Surface Temperature Calibrator	1,4 °C	Calibration is performed using the comparison method. • Carried out in laboratory
Other Thermometers Surface Thermometers	200 °C < *T* ≤ 250 °C	With Surface Temperature Calibrator	1,7 °C	Calibration is performed using the comparison method. • Carried out in laboratory
Controlled Volumes (Temperature Distribution) Hot Plate	20 °C ≤ *T* ≤ 50 °C	With surface temperature meter	1,0 °C	Calibration is performed using the comparison method. • Carried out in laboratory
Controlled Volumes (Temperature Distribution) Hot Plate	50 °C < *T* ≤ 100 °C	With surface temperature meter	1,3 °C	Calibration is performed using the comparison method. • Carried out in laboratory
Controlled Volumes (Temperature Distribution) Hot Plate	100 °C < *T* ≤ 150 °C	With surface temperature meter	1,5 °C	Calibration is performed using the comparison method. • Carried out in laboratory
Controlled Volumes (Temperature Distribution) Hot Plate	150 °C < *T* ≤ 200 °C	With surface temperature meter	2,0 °C	Calibration is performed using the comparison method. • Carried out in laboratory

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Controlled Volumes (Temperature Distribution) Hot Plate	200 °C < *T* ≤ 250 °C	With surface temperature meter	2,5 °C	Calibration is performed using the comparison method. • Carried out in laboratory
Controlled Volumes (Temperature Distribution) Hot Plate	250 °C < *T* ≤ 400 °C	With surface temperature meter	5,0 °C	Calibration is performed using the comparison method. • Carried out in laboratory
Controlled Volumes (Temperature Distribution) Liquid Bath	-90 °C ≤ *T* ≤ 80 °C	Temperature distribution inside the cabin, With reference resistance sensor thermometer	0,15 °C	With portable calibration system • Carried out in laboratory or in customer's site
Controlled Volumes (Temperature Distribution) Liquid Bath	80 °C < *T* ≤ 250 °C	Temperature distribution inside the cabin, With reference resistance sensor thermometer	0,22 °C	With portable calibration system • Carried out in laboratory or in customer's site
Controlled Volumes (Temperature Distribution) Liquid Bath	-90 °C ≤ *T* ≤ 80 °C	Point temperature inside the cabin With reference resistance sensor thermometer	0,05 °C	With portable calibration system • Carried out in laboratory or in customer's site
Controlled Volumes (Temperature Distribution) Liquid Bath	80 °C < *T* ≤ 250 °C	Point temperature inside the cabin With reference resistance sensor thermometer	0,08 °C	With portable calibration system • Carried out in laboratory or in customer's site
Controlled Volumes (Temperature Distribution) Liquid Bath	250 °C < *T* ≤ 400 °C	Point temperature inside the cabin With reference resistance sensor thermometer	0,12 °C	With portable calibration system • Carried out in laboratory or in customer's site
Controlled Volumes (Temperature Distribution) Liquid Bath	-90 °C ≤ *T* ≤ 80 °C	Temperature distribution inside the cabin, With reference thermocouple sensor thermometer	0,50 °C	With portable calibration system • Carried out in laboratory or in customer's site
Controlled Volumes (Temperature Distribution) Liquid Bath	80 °C < *T* ≤ 140 °C	Temperature distribution inside the cabin, With reference thermocouple sensor thermometer	0,60 °C	With portable calibration system • Carried out in laboratory or in customer's site
Controlled Volumes (Temperature Distribution) Liquid Bath	140 °C < *T* ≤ 200 °C	Temperature distribution inside the cabin, With reference thermocouple sensor thermometer	0,70 °C	With portable calibration system • Carried out in laboratory or in customer's site
Controlled Volumes (Temperature Distribution) Liquid Bath	200 °C < *T* ≤ 250 °C	Temperature distribution inside the cabin, With reference thermocouple sensor thermometer	0,80 °C	With portable calibration system • Carried out in laboratory or in customer's site

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Calibration and Measurement Capability (CMC)

Mechanical Quantities/Weighing Tools

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
Balance	$m \leq 10$ kg	With E2 Class Mass	$1 \cdot 10^{-6}$	*m:* Balance Capacity Calibration is performed according to the calibration procedure prepared in accordance with the EURAMET cg.18 document. • Carried out at the customer's site
Balance	$m \leq 40$ kg	With F1 Class Mass	$5{,}3 \cdot 10^{-6}$	*m:* Balance Capacity Calibration is performed according to the calibration procedure prepared in accordance with the EURAMET cg.18 document. • Carried out at the customer's site
Balance	$m \leq 1000$ kg	With M1 Class Mass	$9{,}4 \cdot 10^{-5}$	*m:* Balance Capacity Calibration is performed according to the calibration procedure prepared in accordance with the EURAMET cg.18 document. • Carried out at the customer's site
Balance	1000 kg < $m \leq 2000$ kg	Class M1 Mass and With Substitution Masses	$1{,}2 \cdot 10^{-4}$	*m:* Balance Capacity Calibration is performed according to the calibration procedure prepared in accordance with the EURAMET cg.18 document. • Carried out at the customer's site
Non-automatic Weighing Devices Balance	1 mg $\leq m \leq$ 20 mg	With E1 Class Mass	2,5 µg	*m:* Weighing Value Calibration is performed according to the calibration procedure prepared in accordance with the EURAMET cg.26 document. • Carried out at the customer's site

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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Calibration and Measurement Capability (CMC)

Mechanical Quantities/Pressure

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
Relative Pressure Piston Pressure Standard (Dead Weight Tester)	0,1 MPa ≤ p ≤ 4 MPa	Pneumatic	3 Pa + 1,07·10^{-4}·p	p : Relative Pressure (Pa) Calibration is performed according to the calibration procedure prepared in accordance with the EURAMET cg.3 document. • Carried out in laboratory
Relative Pressure Piston Pressure Standard (Dead Weight Tester)	0,1 MPa ≤ p ≤ 6 MPa	Hydraulic	5 Pa + 5,45·10^{-5}·p	p : Relative Pressure (Pa) Calibration is performed according to the calibration procedure prepared in accordance with the EURAMET cg.3 document. • Carried out in laboratory
Relative Pressure Piston Pressure Standard (Dead Weight Tester)	6 MPa < p ≤ 120 MPa	Hydraulic	122 Pa + 8,79·10^{-5}·p	p : Relative Pressure (Pa) Calibration is performed according to the calibration procedure prepared in accordance with the EURAMET cg.3 document. • Carried out in laboratory
Relative Pressure Analog Manometer Digital Manometer Pressure Calibrator Pressure Transducer Pressure Transmitter	1 bar ≤ p ≤ 40 bar	Pneumatic (DWT)	9,6·10^{-5} bar+ 7,6·10^{-5}·p	p : Relative Pressure [bar] Calibration is performed with a piston manometer according to the calibration procedure prepared in accordance with the EURAMET cg.17 document. • Carried out in laboratory
Relative Pressure Analog Manometer Digital Manometer Pressure Calibrator Pressure Transducer Pressure Transmitter	1 bar ≤ p ≤ 60 bar	Hydraulic (DWT)	1,2·10^{-4} bar+ 2,4·10^{-5}·p	p : Relative Pressure [bar] Calibration is performed with a piston manometer according to the calibration procedure prepared in accordance with the EURAMET cg.17 document. • Carried out in laboratory
Relative Pressure Analog Manometer Digital Manometer Pressure Calibrator Pressure Transducer Pressure Transmitter	60 bar ≤ p ≤ 1200 bar	Hydraulic (DWT)	2,2.10^{-3} bar + 5,4·10^{-5}·p	p : Relative Pressure [bar] Calibration is performed with a piston manometer according to the calibration procedure prepared in accordance with the EURAMET cg.17 document. • Carried out in laboratory
Relative Pressure Analog Manometer Digital Manometer Pressure Calibrator Pressure Transducer Pressure Transmitter	-0,9 bar ≤ p ≤ -0,04 bar	Pneumatic	1,3.10^{-4} bar + 3,7·10^{-4}·p	p : Relative Pressure [bar] Calibration is performed with Electromechanical calibrator according to the calibration procedure prepared in accordance with EURAMET cg.17 document. • Carried out in laboratory or in customer's site

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Relative Pressure Analog Manometer Digital Manometer Pressure Calibrator Pressure Transducer Pressure Transmitter	0,015 bar ≤ p ≤ 1 bar	Pneumatic	$1{,}3.10^{-4}$ bar + $3{,}7{\cdot}10^{-4}{\cdot}p$	p : Relative Pressure [bar] Calibration is performed with Electromechanical calibrator according to the calibration procedure prepared in accordance with EURAMET cg.17 document. • Carried out in laboratory or in customer's site
Relative Pressure Analog Manometer Digital Manometer Pressure Calibrator Pressure Transducer Pressure Transmitter	-0,9 bar ≤ p ≤ 2 bar	Pneumatic	0,63 mbar	Calibration is performed with Electromechanical calibrator according to the calibration procedure prepared in accordance with EURAMET cg.17 document. • Carried out in laboratory or in customer's site
Relative Pressure Analog Manometer Digital Manometer Pressure Calibrator Pressure Transducer Pressure Transmitter	2 bar < p ≤ 25 bar	Pneumatic	$1{,}8.10^{-2}$ bar + $4{\cdot}10^{-4}{\cdot}p$	p : Relative Pressure [bar] Calibration is performed with Electromechanical calibrator according to the calibration procedure prepared in accordance with EURAMET cg.17 document. • Carried out in laboratory or in customer's site
Relative Pressure Analog Manometer Digital Manometer Pressure Calibrator Pressure Transducer Pressure Transmitter	10 bar ≤ p ≤ 400 bar	Hydraulic	$6{,}3.10^{-2}$ bar + $5{\cdot}10^{-4}{\cdot}p$	p : Relative Pressure [bar] Calibration is performed with Electromechanical calibrator according to the calibration procedure prepared in accordance with EURAMET cg.17 document. • Carried out in laboratory or in customer's site
Relative Pressure Analog Manometer Digital Manometer Pressure Calibrator Pressure Transducer Pressure Transmitter	400 bar < p ≤ 700 bar	Hydraulic	$2{,}6.10^{-1}$ bar + $3{\cdot}10^{-4}{\cdot}p$	p : Relative Pressure [bar] Calibration is performed with Electromechanical calibrator according to the calibration procedure prepared in accordance with EURAMET cg.17 document. • Carried out in laboratory or in customer's site
Relative Pressure Pressure Transducer Pressure Transmitter Difference Pressure Meter	-2000 Pa ≤ p ≤ -10 Pa	Pneumatic	3,1 Pa	Calibration is performed with Electromechanical calibrator according to the calibration procedure prepared in accordance with EURAMET cg.17 document. • Carried out in laboratory or in customer's site
Relative Pressure Pressure Transducer Pressure Transmitter Difference Pressure Meter	10 Pa ≤ p ≤ 2000 Pa	Pneumatic	3,1 Pa	Calibration is performed with Electromechanical calibrator according to the calibration procedure prepared in accordance with EURAMET cg.17 document. • Carried out in laboratory or in customer's site
Relative Pressure Pressure Transducer Pressure Transmitter Difference Pressure Meter	-10000 Pa ≤ p ≤ -2001 Pa	Pneumatic	8,1 Pa	Calibration is performed with Electromechanical calibrator according to the calibration procedure prepared in accordance with EURAMET cg.17 document. • Carried out in laboratory or in customer's site

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Relative Pressure Pressure Transducer Pressure Transmitter Difference Pressure Meter	2001 Pa ≤ p ≤ 10000 Pa	Pneumatic	8,1 Pa	Calibration is performed with Electromechanical calibrator according to the calibration procedure prepared in accordance with EURAMET cg.17 document. • Carried out in laboratory or in customer's site
Absolute Pressure Analog Barometer Numeric Barometer	750 hPa ≤ p ≤ 1100 hPa	Pneumatic	0,4 hPa	Calibration is performed with Electromechanical calibrator according to the calibration procedure prepared in accordance with EURAMET cg.17 document. • Carried out in laboratory or in customer's site
Absolute Pressure Analog Manometer Digital Manometer Pressure Transducer Pressure Transmitter Pressure Calibrator	1 bar ≤ p_{abs} ≤ 41 bar	Pneumatic (DWT)	$9{,}6 \cdot 10^{-5}$ bar+ $7{,}5 \cdot 10^{-5} \cdot p_{abs}$	p_{abs}: Absolute Pressure [bar] Calibration is performed with a piston manometer according to the calibration procedure prepared in accordance with the EURAMET cg.17 document. • Carried out in laboratory
Absolute Pressure Analog Manometer Digital Manometer Pressure Transducer Pressure Transmitter Pressure Calibrator	1 bar ≤ p_{abs} ≤ 61 bar	Hydraulic (DWT)	$1{,}2 \cdot 10^{-4}$ bar+ $2{,}4 \cdot 10^{-5} \cdot p_{abs}$	p_{abs} : Absolute Pressure [bar] Calibration is performed with a piston manometer according to the calibration procedure prepared in accordance with the EURAMET cg.17 document. • Carried out in laboratory
Absolute Pressure Analog Manometer Digital Manometer Pressure Transducer Pressure Transmitter Pressure Calibrator	61 bar < p_{abs} ≤ 1201 bar	Hydraulic (DWT)	$2{,}2 \cdot 10^{-3}$ bar + $5{,}4 \cdot 10^{-5} \cdot p_{abs}$	p_{abs}: Absolute Pressure [bar] Calibration is performed with a piston manometer according to the calibration procedure prepared in accordance with the EURAMET cg.17 document. • Carried out in laboratory
Absolute Pressure Analog Manometer Digital Manometer Pressure Transducer Pressure Transmitter Pressure Calibrator	0,015 bar ≤ p_{abs} ≤ 3 bar	Pneumatic	0,6 mbar	p_{abs} : Absolute Pressure [bar] Calibration is performed with a electromechanical calibrator according to the calibration procedure prepared in accordance with the EURAMET cg.17 document. • Carried out in laboratory or in customer's site
Absolute Pressure Analog Manometer Digital Manometer Pressure Transducer Pressure Transmitter Pressure Calibrator	2 bar < p_{abs} ≤ 26 bar	Pneumatic	$1{,}8 . 10^{-2}$ bar + $4 \cdot 10^{-4} \cdot p_{abs}$	p_{abs} : Absolute Pressure [bar] Calibration is performed with a electromechanical calibrator according to the calibration procedure prepared in accordance with the EURAMET cg.17 document. • Carried out in laboratory or in customer's site
Absolute Pressure Analog Manometer Digital Manometer Pressure Transducer Pressure Transmitter Pressure Calibrator	10 bar ≤ p_{abs} ≤ 401 bar	Hydraulic	$6{,}4 . 10^{-2}$ bar + $5 \cdot 10^{-4} \cdot p_{abs}$	p_{abs} : Absolute Pressure [bar] Calibration is performed with a electromechanical calibrator according to the calibration procedure prepared in accordance with the EURAMET cg.17 document. • Carried out in laboratory or in customer's site

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Absolute Pressure Analog Manometer Digital Manometer Pressure Transducer Pressure Transmitter Pressure Calibrator	401 bar < p_{abs} ≤ 701 bar	Hydraulic	$2{,}7.10^{-1}$ bar + $3 \cdot 10^{-4} \cdot p_{abs}$	p_{abs} : Absolute Pressure [bar] Calibration is performed with a electromechanical calibrator according to the calibration procedure prepared in accordance with the EURAMET cg.17 document. • Carried out in laboratory or in customer's site

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Calibration and Measurement Capability (CMC)

Time and Frequency

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
Frequency Frequency Meters Frequency Meters Optical Tachometer	6 rpm ≤ ω ≤ 99,99 rpm	r = 0,01 rpm	0,013 rpm + 5,6 · 10^{-5} · ω	ω : Measured Speed [rpm] r : Resolution With the help of frequency applied to the optical LED with signal generator • Carried out in laboratory or in customer's site
Frequency Frequency Meters Frequency Meters Optical Tachometer	99,99 rpm < ω ≤ 999,9 rpm	r = 0,1 rpm	0,12 rpm + 6,1.10^{-5}·ω	ω : Measured Speed [rpm] r : Resolution With the help of frequency applied to the optical LED with signal generator • Carried out in laboratory or in customer's site
Frequency Frequency Meters Frequency Meters Optical Tachometer	999,9 rpm < ω ≤ 99999 rpm	r =1 rpm	1,2 rpm + 1,2.10^{-4}·ω	ω : Measured Speed [rpm] r : Resolution With the help of frequency applied to the optical LED with signal generator • Carried out in laboratory or in customer's site
Frequency Frequency Meters Frequency Meters Contact Tachometer	250 rpm ≤ ω ≤ 999,9 rpm	r = 0,1 rpm	0,3 rpm + 1,8.10^{-4}·ω	ω : Measured Speed [rpm] r : Resolution Calibration is performed using the comparison method with an optical tachometer. • Carried out in laboratory or in customer's site
Frequency Frequency Meters Frequency Meters Contact Tachometer	999,9 rpm < ω ≤ 1500 rpm	r = 1 rpm	2,0 rpm + 1,2.10^{-4}·ω	ω : Measured Speed [rpm] r : Resolution Calibration is performed using the comparison method with an optical tachometer. • Carried out in laboratory or in customer's site
Frequency Frequency Sources Frequency Standard Frequency Generator (Centrifuge-Mixer Devices)	6 rpm ≤ ω ≤ 99,99 rpm	r = 0,01 rpm	0,022 rpm + 2,0.10^{-4}·ω	ω : Measured Speed [rpm] r : Resolution Calibration is performed using the direct measurement method with an optical tachometer. • Carried out in laboratory or in customer's site
Frequency Frequency Sources Frequency Standard Frequency Generator (Centrifuge-Mixer Devices)	99,99 rpm < ω ≤ 999,9 rpm	r = 0,1 rpm	0,22 rpm + 2,0.10^{-4}·ω	ω : Measured Speed [rpm] r : Resolution Calibration is performed using the direct measurement method with an optical tachometer. • Carried out in laboratory or in customer's site
Frequency Frequency Sources Frequency Standard Frequency Generator (Centrifuge-Mixer Devices)	999,9 rpm < ω ≤ 99999 rpm	r = 1 rpm	1,9 rpm + 1,6.10^{-4}·ω	ω : Measured Speed [rpm] r : Resolution Calibration is performed using the direct measurement method with an optical tachometer. • Carried out in laboratory or in customer's site

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Time Range Interval Meters Time Difference Meter (Frequency Counter, Stopwatch, Timer) Time Interval Meters	1 s ≤ *t* ≤ 7200 s	*r* = 1 ms	0,025 s + 1,2.10^{-5}·*t*	*r* : Resolution *t* : Measured time interval [s] Calibration is performed using the direct measurement method with a reference stopwatch. • Carried out in laboratory or in customer's site
Time Range Interval Meters Time Difference Meter (Frequency Counter, Stopwatch, Timer) Time Interval Meters	7200 s < *t* ≤ 86400 s	*r* = 1 ms	0,002 s + 1,5.10^{-5}·*t*	*r* : Resolution *t* : Measured time interval [s] Calibration is performed using the direct measurement method with a reference stopwatch. • Carried out in laboratory or in customer's site

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Calibration and Measurement Capability (CMC)

Dimensional Quantities

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
Length Measuring Devices 1-Dimension Progress Measuring Devices [Transducer, Actuator, Inductive Probe] (LVDT, PZT, ...)	0 mm ≤ *L* ≤ 100 mm	r= 0,05 µm With 1-D Measuring Device	(0,5 + 0,7.*L*) µm	*L* : Measured Value [m] *r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Part 14.1 document. • Carried out in laboratory
Length Measuring Devices 1-Dimension Progress Measuring Devices [Transducer, Actuator, Inductive Probe] (LVDT, PZT, ...)	0 mm ≤ *L* ≤ 100 mm	r= 0,05 µm With Laser Interferometer	(0,14 + 1,0.*L*) µm	*L* : Measured Value [m] *r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Part 14.1 document. • Carried out in laboratory
Length Measuring Devices Gauge Block Comparators	0,5 mm ≤ *L* ≤ 100 mm	*r*= 0,01 µm	33 nm	*r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the EURAMET document cg.02 document. • Carried out at the customer's site
Length Measuring Devices 1-Dimension Measuring Device (Universal etc.)	0 mm ≤ *L* ≤ 300 mm	*r*= 0,01 µm With Block Gauge	(0,2 + 2.*L*) µm	*L* : Measured Value [m] *r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 17.1 document. • Carried out at the customer's site
Length Measuring Devices Measure Clock Test Device (Gauge Calibrator, Comparator Calibrator etc.)	0 mm ≤ *L* ≤ 25 mm	*r*= 0,001 mm With Electronic Measuring Probe	0,8 µm	*r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 10.4 document. • Carried out in laboratory or in customer's site
Length Measuring Devices Measure Clock Test Device (Gauge Calibrator, Comparator Calibrator etc.)	0 mm ≤ *L* ≤ 100 mm	*r*= 0,01 µm With Laser Interferometer	(0,10 + 1,0.*L*) µm	*L* : Measured Value [m] *r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 17.2 document. • Carried out in laboratory or in customer's site
Handheld Basic Measuring Devices Micrometer Head	0 mm ≤ *L* ≤ 25 mm	r= 0,001 µm With 1-D Measuring Device	0,8 µm	*r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 10.4 document. • Carried out in laboratory

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Dimension Standards Gauge Block (short 0.5 mm - 100 mm)	0,5 mm ≤ *L* ≤ 100 mm	Centre Point Deviation with 1-D Measuring Instrument for Steel Gauge Blocks	(0,07 + 0,5·*L*) µm	*r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the ISO 3650, VDI/VDE/DGQ 2618 Bölüm 3.1 document. • Carried out in laboratory
Dimension Standards Gauge Block (short 0.5 mm - 100 mm)	0,5 mm ≤ *L* ≤ 100 mm	For Ceramic Gauge Blocks Centre with 1-D Measuring Device Point Deviation	(0,07 + 0,6·*L*) µm	*r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the ISO 3650, VDI/VDE/DGQ 2618 Bölüm 3.1 document. • Carried out in laboratory
Dimension Standards Gauge Block (short 0.5 mm - 100 mm)	0,5 mm ≤ *L* ≤ 100 mm	Centre Point Deviation with 1-D Measuring Instrument for Tungsten Carbide Gage Blocks	(0,07 + 1,3·*L*) µm	*r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the ISO 3650, VDI/VDE/DGQ 2618 Bölüm 3.1 document. • Carried out in laboratory
Dimension Standards Gauge Block (short 0.5 mm - 100 mm)	0,5 mm ≤ *L* ≤ 100 mm	Deviation Range (v)	0,05 µm	Calibration is performed according to the calibration procedure prepared in accordance with the ISO 3650, VDI/VDE/DGQ 2618 Bölüm 3.1 document. • Carried out in laboratory
Dimension Standards Long Gauge Block (Length Bar) (125 mm- 1000 mm)	100 mm < *L* ≤ 300 mm	Centre Point Deviation with 1-D Measuring Instrument for Steel Gauge Blocks	(0,15 + 1,5·*L*) µm	*L* : Measured Value [m] Calibration is performed according to the calibration procedure prepared in accordance with the ISO 3650, VDI/VDE/DGQ 2618 Bölüm 3.1 document. • Carried out in laboratory
Dimension Standards Long Gauge Block (Length Bar) (125 mm- 1000 mm)	100 mm < *L* ≤ 300 mm	For Ceramic Gauge Blocks Centre with 1-D Measuring Device Point Deviation	(0,15 + 1,7·*L*) µm	*L* : Measured Value [m] Calibration is performed according to the calibration procedure prepared in accordance with the ISO 3650, VDI/VDE/DGQ 2618 Bölüm 3.1 document. • Carried out in laboratory
Dimension Standards Long Gauge Block (Length Bar) (125 mm- 1000 mm)	100 mm < *L* ≤ 300 mm	Centre Point Deviation with 1-D Measuring Instrument for Tungsten Carbide Gage Blocks	(0,15 + 4·*L*) µm	*L* : Measured Value [m] Calibration is performed according to the calibration procedure prepared in accordance with the ISO 3650, VDI/VDE/DGQ 2618 Bölüm 3.1 document. • Carried out in laboratory
Dimension Standards Micrometer Setting Bar [Flat, Screw]	25 mm ≤ *L* ≤ 300 mm	Centre Point Deviation with 1-D Measuring Device	(0,4 + 3·*L*) µm	*L* : Measured Value [m] Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 4.4 document. • Carried out in laboratory
Dimension Standards Thickness gauge (Synthyl etc. (Feeler Gauge))	10 µm ≤ *L* ≤ 2 mm	3 Point Measurement with 1-D Measuring Device	0,7 µm	Calibration is performed according to the calibration procedure prepared in accordance with the DIN 2275 document. • Carried out in laboratory

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Line Standards Precision Line Scale Microscope Control Micrometry (Stage micrometry)	0 mm ≤ *L* ≤ 10 mm	Optical Reading Method With Reference Glass Ruler	0,5 µm	Calibration is performed using the comparison method • Carried out in laboratory
Line Standards Precision Line Scale Microscope Control Micrometry (Stage micrometry)	10 mm < *L* ≤ 300 mm	Optical Reading Method With Reference Glass Ruler	(0,6 + 2,7·*L*) µm	*L* : Measured Value [m] Calibration is performed using the comparison method • Carried out in laboratory
Line Standards Precision Line Scale Microscope Control Micrometry (Stage micrometry)	0 mm ≤ *L* ≤ 300 mm	With Laser Interferometer	(0,4 + 1,1·*L*) µm	*L* : Measured Value [m] Calibration is performed using the comparison method • Carried out in laboratory
Line Standards Steel Ruler, Workshop or Mechanical Business Scales	0 mm ≤ *L* ≤ 300 mm	Optical Reading Method With 2-D Measuring Device	0,05 mm	Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 8.2 document. • Carried out in laboratory
Line Standards Steel Ruler, Workshop or Mechanical Business Scales	0 m ≤ *L* ≤ 3 m	With Gauge Ruler	(200 + 30·*L*) µm	*L* : Measured Value [m] Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 8.2 document. • Carried out in laboratory
Line Standards Tape Meters (Land, Workshop, Pi) (Geodesic) Wire	0 m ≤ *L* ≤ 3 m	With Gauge Ruler	(200 + 38·*L*) µm	*L* : Measured Value [m] Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 8.2 document. • Carried out in laboratory
Line Standards Tape Meters (Land, Workshop, Pi) (Geodesic) Wire	3 m < *L* ≤ 50 m	With Gauge Ruler	(200 + 75·*L*) µm	*L* : Measured Value [m] Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 8.2 document. • Carried out in laboratory
Diameter Standards Exterior Cylinder (Bumper Mastar (Ref, Pass- not pass, etc.) Piston, Pin (Screw Measuring Pins) Wire, Setting Gauge)	0,2 mm ≤ *D* ≤ 300 mm	Exterior with 1-D Measuring Device Diameter Measurement	(0,7 + 2,4·*D*) µm	*D* : Measured Diameter [m] Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 4.1 document. • Carried out in laboratory
Diameter Standards Exterior Cylinder (Bumper Mastar (Ref, Pass- not pass, etc.) Piston, Pin (Screw Measuring Pins) Wire, Setting Gauge)	0,1 mm ≤ *D* ≤ 20 mm	Exterior with 1-D Measuring Device Diameter Measurement	0,4 µm	Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 4.2 document. • Carried out in laboratory

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Diameter Standards Internal Cylinder (Ring Mastar (Ref, Passes-not pass etc.))	0,7 mm ≤ *D* ≤ 200 mm	Inner with 1-D Measuring Device Diameter Measurement	(0,6 + 2,5·*D*) µm	*D* : Measured Diameter [m] Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 4.1 document. • Carried out in laboratory
Diameter Standards Globe (Ball, Screw Measurement Probes (T-Probe))	0,3 mm ≤ *D* ≤ 100 mm	Diameter with 1-D Measuring Device Measurement	(0,4 + 4,6·*D*) µm	*D* : Measured Diameter [m] Calibration is performed using the comparison method • Carried out in laboratory
Angle Measuring Devices (Bevel) Protractor	*α* ≤ 360°	r= 30"	0,4'	*r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 7.2 document. • Carried out in laboratory
Angle Measuring Devices (Bevel) Protractor	Base Length *L* ≤ 1000 mm	Parallelism	3,0 µm	Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 7.2 document. • Carried out in laboratory
Angle Measuring Devices (Bevel) Protractor	Base Length *L* ≤ 1000 mm	Straightness	2,0 µm	Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 7.2 document. • Carried out in laboratory
Angle Measuring Devices Clinometer	*α* ≤ 90°	r= 0,001°	0,0012°	*r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the DIN 877, TS10832 document. • Carried out in laboratory
Angle Measuring Devices Clinometer	Base Length *L* ≤ 200 mm	r= 0,001 mm/m	3,5 µm/m	*r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the DIN 877, TS10832 document. • Carried out in laboratory
Angle Measuring Devices Electronic Level Meter Spirit Level	Base Length *L* ≤ 200 mm	r= 0,02 mm/m	6 µm/m	*r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the DIN 877, TS10832 document. • Carried out in laboratory
Angle Measuring Devices Electronic Level Meter Spirit Level	Base Length *L* ≤ 1000 mm	r= 0,5 mm/m	0,3 mm/m	*r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the DIN 877, TS10832 document. • Carried out in laboratory

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Angle Measuring Devices Electronic Level Meter Spirit Level	Base Length $L \leq 1000$ mm	Parallelism	3,0 µm	r : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the DIN 877, TS10832 document. • Carried out in laboratory
Flatness Standards Optical Flat Optical Parallel (Parallel Slope)	$0 \text{ mm} \leq L \leq 100$ mm	Centre Thickness Measurement	0,7 µm	Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 6.1 document. • Carried out in laboratory
Flatness Standards Optical Flat Optical Parallel (Parallel Slope)	$0 \text{ mm} \leq L \leq 100$ mm	Parallelism Detection	0,08 µm	Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 6.1 document. • Carried out in laboratory
Flatness Standards Optical Flat Optical Parallel (Parallel Slope)	$60 \text{ mm} < D \leq 100$ mm	With Reference Glass Gauge Flatness Measurement	0,4 µm	Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 6.1 document. • Carried out in laboratory
Flatness Standards Optical Flat Optical Parallel (Parallel Slope)	$0 \text{ mm} \leq D \leq 60$ mm	With Gauge Comparator Flatness Measurement	0,2 µm	Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 6.1 document. • Carried out in laboratory
Flatness Standards Plate	$L \leq 8$ m	With Laser Interferometer Flatness Measurement $F = \pm 2$ mm	$(0,6 + 0,004.F)$ µm	L : Edge Length [m] F : Measured Flatness Error [µm] Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 6.2 document. • Carried out at the customer's site
Screw Standards Flat Screw Plug Gauge	Section Department Diameter $D \leq 300$ mm	Step: 0.5 mm - 6 mm	2,5 µm	Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 4.8 document. • Carried out in laboratory
Screw Standards Straight Screw Ring Gauge	Section Department Diameter $D \leq 200$ mm	Step: 0.5 mm - 6 mm	2,7 µm	Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 4.9 document. • Carried out in laboratory
Handheld Basic Measuring Devices Screw Dental Combors	$a \leq 10$ mm (Step)	Step Measurement	10,0 µm	Calibration is performed using the direct measurement method with the optical measurement method. • Carried out in laboratory

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Handheld Basic Measuring Devices Screw Dental Combors	$a \leq 10$ mm (Step)	Angle Measurement	15'	Calibration is performed using the direct measurement method with the optical measurement method. • Carried out in laboratory
2 -Dimension 3-Dimension Measuring Devices Projection Device Profile Projection Measuring Microscope	X and Y Axes $L \leq 10$ mm	r= 0.1 µm With Glass Ruler With Laser Interferometer	0,5 µm 0,2 µm	r : Resolution Calibration is performed using the comparison method. • Carried out at the customer's site
2 -Dimension 3-Dimension Measuring Devices Projection Device Profile Projection Measuring Microscope	X and Y Axes 10 mm < L ≤ 300 mm	r= 0.1 µm With Glass Ruler With Laser Interferometer	(0,7 + 4.L) µm (0,2 + 1.L) µm	L : Measured Value [m] r : Resolution Calibration is performed using the comparison method. • Carried out at the customer's site
2 -Dimension 3-Dimension Measuring Devices Projection Device Profile Projection Measuring Microscope	Angle Measurement $0° \leq a \leq 360°$	With Angle Gauge Blocks	0,3'	Calibration is performed using the comparison method. • Carried out at the customer's site
2 -Dimension 3-Dimension Measuring Devices Projection Device Profile Projection Measuring Microscope	Magnification Ratio	5X-100X	%1-%0,3	Calibration is performed using the comparison method. • Carried out at the customer's site
Handheld Basic Measuring Devices Outer Diameter Micrometry	0 mm ≤ L ≤ 2000 mm	r= 0,001 mm	(1,3 + 25.L) µm	L : Measured Value [m] r : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 10.1 document. • Carried out in laboratory
Handheld Basic Measuring Devices Depth Micrometry	0 mm ≤ L ≤ 300 mm	r= 0,001 mm	(1,0 + 10.L) µm	L : Measured Value [m] r : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 10.5 document. • Carried out in laboratory
Handheld Basic Measuring Devices Two Dotted Internal Diameter Micrometry	0 mm ≤ L ≤ 300 mm	r= 0,001 mm	(1,0 + 10.L) µm	L : Measured Value [m] r : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 10.7 document. • Carried out in laboratory

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Handheld Basic Measuring Devices Three-Point Inner Diameter Micrometry	0 mm ≤ *L* ≤ 100 mm	r= 0,001 mm	(1,2 + 20.*L*) µm	*L* : Measured Value [m] *r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 10.8 document. • Carried out in laboratory
Handheld Basic Measuring Devices Caliper (External diameter, Internal diameter, Depth, Step measurements)	0 mm ≤ *L* ≤ 300 mm	r= 0,005 mm	(6 + 20.*L*) µm	*L* : Measured Value [m] *r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 9.1 document. • Carried out in laboratory
Handheld Basic Measuring Devices Caliper (External diameter, Internal diameter, Depth, Step measurements)	300 mm < *L* ≤ 3000 mm	r= 0,01 mm	(15 + 32.*L*) µm	*L* : Measured Value [m] *r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 9.1 document. • Carried out in laboratory
Handheld Basic Measuring Devices Depth Calip	0 mm ≤ *L* ≤ 200 mm	r= 0,005 mm	(7 + 15.*L*) µm	*L* : Measured Value [m] *r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 9.2 document. • Carried out in laboratory
Handheld Basic Measuring Devices Depth Calip	200 mm < *L* ≤ 1000 mm	r= 0,01 mm	(13 + 25.*L*) µm	*L* : Measured Value [m] *r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 9.2 document. • Carried out in laboratory
Handheld Basic Measuring Devices Height Gage	0 mm ≤ *L* ≤ 1000 mm	r= 0,01 mm	(13 + 25.*L*) µm	*L* : Measured Value [m] *r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 9.3 document. • Carried out in laboratory
Handheld Basic Measuring Devices Measure Hours (Comparator)	0 mm ≤ *L* ≤ 10 mm	r= 0,001 mm Analogues	1,0 µm	*r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 11.1 document. • Carried out in laboratory
Handheld Basic Measuring Devices Measure Hours (Comparator)	0 mm ≤ *L* ≤ 100 mm	r= 0,001 mm Analogues	(2 + 3.*L*) µm	*L* : Measured Value [m] *r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 11.1 document. • Carried out in laboratory

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Handheld Basic Measuring Devices Measure Hours (Comparator)	0 mm ≤ *L* ≤ 100 mm	r= 0,5 µm Digital	(0,7 + 6.*L*) µm	*L* : Measured Value [m] *r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 11.4 document. • Carried out in laboratory
Handheld Basic Measuring Devices Secretion Comparator (Precision Examiner)	0 mm ≤ *L* ≤ 2 mm	r= 0,001 mm	0,7 µm	*r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 11.3 document. • Carried out in laboratory
Handheld Basic Measuring Devices Indicator	0 mm ≤ *L* ≤ 1 mm	r= 0,001 mm	0,6 µm	*r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 11.2 document. • Carried out in laboratory
Handheld Basic Measuring Devices Fork Gauge (Interior, External)	*D* ≤ 250 mm	With 1-D Measuring Device	(0,6 + 2,5·*D*) µm	*D* : Measured Diameter [m] Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 4,7 document. • Carried out in laboratory
Handheld Basic Measuring Devices Radius Gauges	*L* ≤ 50 mm	With 2-D Measuring Device	10,0 µm	Calibration is performed using the direct measurement method with the optical measurement method. • Carried out in laboratory
Handheld Basic Measuring Devices Hole Gauge (Bore Gauge etc.)	0 mm ≤ *L* ≤ 300 mm	r= 0,001 mm	(1,5 + 10.*L*) µm	*L* : Measured Value [m] *r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 13.2 document. • Carried out in laboratory
Handheld Basic Measuring Devices Thickness Meter (Interior, External, Passometers etc.)	0 mm ≤ *L* ≤ 50 mm	r= 0,001 mm	1,9 µm	*r* : Resolution Calibration is performed using the comparison method with a parallel block gauge. • Carried out in laboratory
Handheld Basic Measuring Devices Thickness Meter (Interior, External, Passometers etc.)	0 mm ≤ *L* ≤ 2 mm	r= 0,001 mm	0,7 µm	*r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 10,3 document. • Carried out in laboratory
Handheld Basic Measuring Devices Thickness Meter (Interior, External, Passometers etc.)	0 mm ≤ *L* ≤ 200 mm	r= 0,001 mm	3,0 µm	*r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 12,1 document. • Carried out in laboratory

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Handheld Basic Measuring Devices Thickness Meter (Interior, External, Passometers etc.)	0 mm ≤ *L* ≤ 100 mm	r= 0,001 mm	3,0 µm	*r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 13,1 document. • Carried out in laboratory
Handheld Basic Measuring Devices Applikator	*L* ≤ 2 mm	Jeans Difference	0,6 µm	Calibration is performed according to the calibration procedure prepared in accordance with the ASTM D 823 ve ASTM D4400 document. • Carried out in laboratory
Handheld Basic Measuring Devices Grindometer	*L* ≤ 100 µm	Jeans Difference	0,6 µm	Calibration is performed according to the calibration procedure prepared in accordance with the ISO 1524 ve ASTM D1210 document. • Carried out in laboratory
Handheld Basic Measuring Devices Wet Film Thickness Gauge	*L* ≤ 5 mm	Jeans Difference	2,0 µm	Calibration is performed according to the calibration procedure prepared in accordance with the ISO 2808 ve ASTM D4414 document. • Carried out in laboratory
Handheld Basic Measuring Devices Paint Adhesion Test Comb (Cross-Cut) EN ISO 2409	*L* ≤ 10 mm	Jeans Difference	6,0 µm	Calibration is performed according to the calibration procedure prepared in accordance with the ISO 2409 document. • Carried out in laboratory
Handheld Basic Measuring Devices Paint Adhesion Test Comb (Cross-Cut) EN ISO 2409	*L* ≤ 10 mm	Angle Measurement	10'	Calibration is performed according to the calibration procedure prepared in accordance with the ISO 2409 document. • Carried out in laboratory
Reference Materials [Sieve, Mesh] Aperture (Aperture)	Mesh Range 20 µm ≤ *L* ≤ 5 mm	With 2-D Measuring Device	(0,9 + 6,5.*L*) µm	*L* : Measured Mesh Spacing [m] Calibration is performed according to the calibration procedure prepared in accordance with the ISO 3310-1-2-3, TS 5458 ISO 5223 ve TS 9582 ISO 933 document. • Carried out in laboratory
Reference Materials [Sieve, Mesh] Aperture (Aperture)	Mesh Range 5 mm < *L* ≤ 125 mm	With the Digital Caliper	(40 + 2,6.*L*) µm	*L* : Measured Mesh Spacing [m] Calibration is performed according to the calibration procedure prepared in accordance with the ISO 3310-1-2-3, TS 5458 ISO 5223 ve TS 9582 ISO 933 document. • Carried out in laboratory
Reference Materials Concrete Sample Mold	35 mm ≤ *L* ≤ 300 mm	Parallelism	0,03 mm	Calibration is performed according to the calibration procedure prepared in accordance with the TS 12390-1, TS 196-1, ASTM D1883-99, ASTM D1557 ve 698-07 document. • Carried out in laboratory

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Reference Materials Concrete Sample Mold	35 mm ≤ *L* ≤ 300 mm	Steepness	0,05 mm	Calibration is performed according to the calibration procedure prepared in accordance with the TS 12390-1, TS 196-1, ASTM D1883-99, ASTM D1557 ve 698-07 document. • Carried out in laboratory
Reference Materials Concrete Sample Mold	35 mm ≤ *L* ≤ 300 mm	Straightness	0,01 mm	Calibration is performed according to the calibration procedure prepared in accordance with the TS 12390-1, TS 196-1, ASTM D1883-99, ASTM D1557 ve 698-07 document. • Carried out in laboratory
Coating Thickness Coating Thickness Standard (Thickness Foils)	10 µm ≤ *L* ≤ 50 mm	5 Point Measurement with 1-D Measuring Device	(0,5 + 30.*L*) µm	Calibration is performed according to the calibration procedure prepared in accordance with the TS 2311 EN ISO 2178 ve TS 2674 EN ISO 2360 document. • Carried out in laboratory
Coating Thickness Coating Thickness Measuring Device	0 mm ≤ *L* ≤ 2 mm	r= 0.1 µm With Thickness Foil	0,8 µm	*r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the TS 2311 EN ISO 2178 ve TS 2674 EN ISO 2360 document. • Carried out in laboratory
Length Measuring Devices 1-Dimension Measuring Device (Universal etc.)	0 mm ≤ *L* ≤ 1000 mm	r= 0,01 µm With Laser Interferometer	(0,1 + 0,5.*L*) µm	*L* : Measured Value [m] *r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 17.1 ve 17.2 document. • Carried out at the customer's site
2 - Dimension 3-Dimension Measuring Devices Three-Dimensional Measurement Device (CMM)	X, Y and Z Axes 0 m ≤ *L* ≤ 10 m	With Laser Interferometer	(0,6 + 1,8.*L*) µm	*L* : Measured Value [m] *r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 17.2 ve EN ISO 10360 document. • Carried out at the customer's site
Length Measuring Devices Single Axis Linear Measurement Systems (Tape Measure, Steel Ruler etc. Calibration Stands)	0 m ≤ *L* ≤ 10 m	r= 0,001 mm With Laser Interferometer	(0,8 + 1,8.*L*) µm	*L* : Measured Value [m] *r* : Resolution Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 17.2 document. • Carried out at the customer's site
Dimension Standards Gauge Block (short 0.5 mm - 100 mm)	*L* < 0,5 mm	Centre with 1-D Measuring Device Point Deviation	0.18 µm For All Types	Calibration is performed using the comparison method • Carried out in laboratory

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Diameter Standards Tapered Buffer Adjusting Gauge	$D \leq 200$ mm	Exterior with 1-D Measuring Device Diameter Measurement	2,0 µm	Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 4.12 document. • Carried out in laboratory
Diameter Standards Tapered Ring Adjusting Gauge	$D \leq 200$ mm	Inner with 1-D Measuring Device Diameter Measurement	2,0 µm	Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 4.12 document. • Carried out in laboratory
Screw Standards Tapered Screw Plug Gauge	Section Department Diameter $D \leq 300$ mm	Step : 0.5 mm - 6 mm	3,0 µm	Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 4.12 document. • Carried out in laboratory
Screw Standards Tapered Screw Ring Gauge	Section Department Diameter $D \leq 200$ mm	Step : 0.5 mm - 6 mm	2,7 µm	Calibration is performed according to the calibration procedure prepared in accordance with the VDI/VDE/DGQ 2618 Bölüm 4.12 document. • Carried out in laboratory
Handheld Basic Measuring Devices Ultrasonic Thickness Meter	$0 \text{ mm} \leq L \leq 100$ mm	r = 0,001 mm	$(5{,}0 + 30 \cdot L)$ µm	L : Measured Value [m] r : Resolution Calibration is performed using the comparison method • Carried out in laboratory
2 - Dimension 3- Dimension Measuring Devices Surface Roughness Measurement Device	$0{,}4 \text{ µm} \leq Ra \leq 3$ µm	With roughness standard	$(23 + 33 \cdot Ra)$ nm	Ra: Measured Roughness Parameter, [µm] Calibration is performed according to the calibration procedure prepared in accordance with the DKD 4.2 Part 1 document. • Carried out in laboratory
2 - Dimension 3- Dimension Measuring Devices Surface Roughness Measurement Device	$1{,}6 \text{ µm} \leq Rz \leq 11{,}5$ µm	With roughness standard	$(84 + 32 \cdot Rz)$ nm	Rz: Measured Roughness Parameter, [µm] Calibration is performed according to the calibration procedure prepared in accordance with the DKD 4.2 Part 1 document. • Carried out in laboratory
Handheld Basic Measuring Devices Welder's Caliper (Boden) Welding Visual Control Gauges (Welding Caliper)	$0 \text{ mm} \leq L \leq 50$ mm	Height measurement	0,012 mm	Calibration is performed using the comparison method with a parallel block gauge. • Carried out in laboratory
Handheld Basic Measuring Devices Welding Visual Control Gauges (Welding Caliper) Interval Ruler	$0 \text{ mm} \leq L \leq 100$ mm	Ruler measurement	0,02 mm	Calibration is performed using the direct measurement method with the optical measurement method. • Carried out in laboratory
Handheld Basic Measuring Devices Welding Visual Control Gauges (Welding Caliper)	$\alpha \leq 90°$	Angle measurement	0,02°	Calibration is performed using the direct measurement method with the optical measurement method. • Carried out in laboratory

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Handheld Basic Measuring Devices Chamfer Caliper	0 mm ≤ *L* ≤ 50 mm	Chamfer measurement	0,012 mm	Calibration is performed using the direct measurement method with the optical measurement method. • Carried out in laboratory
Long distance Laser meter	0 mm ≤ *L* ≤ 20 m	r = 1 mm	(2 + 0,16 · *L*) mm	*L* : Measured Value [m] *r* : Resolution Calibration is performed using the comparison method with a reference laser meter. • Carried out in laboratory or in customer's site
Optical Standards Radius, Diameter Standards (Templates)	*D* ≤ 50 mm	With 2-D Measuring Device	2,3 µm	Calibration is performed using the direct measurement method with the optical measurement method. • Carried out in laboratory
Optical Standards Angle Templates	*α* ≤ 360°	With 2-D Measuring Device	0,4'	Calibration is performed using the direct measurement method with the optical measurement method. • Carried out in laboratory

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Calibration and Measurement Capability (CMC)

Mechanical Quantities/Hardness

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
Hardness Test Equipment Brinell Hardness Test Equipment	100 ≤ *HB* ≤ 450	HBW 10 / 3000	%0,6	Calibration is performed according to the calibration procedure prepared in accordance with the TS EN ISO 6506-2 ve ASTM E10 document. These values are based on indirect comparisons with hardness comparison plates. are the uncertainty values in the calibration. In direct calibration uncertainty values are also given. • Carried out at the customer's site
Hardness Test Equipment Brinell Hardness Test Equipment	100 ≤ *HB* ≤ 450	HBW 5 / 750	%0,9	Calibration is performed according to the calibration procedure prepared in accordance with the TS EN ISO 6506-2 ve ASTM E10 document. These values are based on indirect comparisons with hardness comparison plates. are the uncertainty values in the calibration. In direct calibration uncertainty values are also given. • Carried out at the customer's site
Hardness Test Equipment Brinell Hardness Test Equipment	100 ≤ *HB* ≤ 450	HBW 2,5 / 187,5	%1,2	Calibration is performed according to the calibration procedure prepared in accordance with the TS EN ISO 6506-2 ve ASTM E10 document. These values are based on indirect comparisons with hardness comparison plates. are the uncertainty values in the calibration. In direct calibration uncertainty values are also given. • Carried out at the customer's site
Hardness Test Equipment Brinell Hardness Test Equipment	100 ≤ *HB* ≤ 450	HBW 2,5 / 62,5	%0,8	Calibration is performed according to the calibration procedure prepared in accordance with the TS EN ISO 6506-2 ve ASTM E10 document. These values are based on indirect comparisons with hardness comparison plates. are the uncertainty values in the calibration. In direct calibration uncertainty values are also given. • Carried out at the customer's site
Hardness Indenter Optical Track Measuring Equipment Inspection / Calibration	*L* ≤ 10 mm	with stage micrometer	$1{,}5 \cdot 10^{-3} \cdot L$ (from 0.5 µm not being small provided that)	*L* : Measured Value [mm] Calibration is performed according to the calibration procedure prepared in accordance with the TS EN ISO 6506-2 ve ASTM E10 document. • Carried out at the customer's site
Hardness Test Equipment Rockwell Hardness Test Equipment	HRB		1,0 HRB	Calibration is performed according to the calibration procedure prepared in accordance with the TS EN ISO 6508-2 ve ASTM E18 document. These values are based on indirect comparisons with hardness comparison plates. are the uncertainty values in the calibration. In direct calibration uncertainty values are also given. • Carried out at the customer's site

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Hardness Test Equipment Rockwell Hardness Test Equipment	HRC		0,5 HRC	Calibration is performed according to the calibration procedure prepared in accordance with the TS EN ISO 6508-2 ve ASTM E18 document. These values are based on indirect comparisons with hardness comparison plates. are the uncertainty values in the calibration. In direct calibration uncertainty values are also given. • Carried out at the customer's site
Hardness Test Equipment Vickers Hardness Test Equipment	HV0.1		%5,4	Calibration is performed according to the calibration procedure prepared in accordance with the TS EN ISO 6507-2, ASTM E384 ve ASTM E92 document. These values are based on indirect comparisons with hardness comparison plates. are the uncertainty values in the calibration. In direct calibration uncertainty values are also given. • Carried out at the customer's site
Hardness Test Equipment Vickers Hardness Test Equipment	HV0.3		%3,1	Calibration is performed according to the calibration procedure prepared in accordance with the TS EN ISO 6507-2, ASTM E384 ve ASTM E92 document. These values are based on indirect comparisons with hardness comparison plates. are the uncertainty values in the calibration. In direct calibration uncertainty values are also given. • Carried out at the customer's site
Hardness Test Equipment Vickers Hardness Test Equipment	HV0.5		%2,7	Calibration is performed according to the calibration procedure prepared in accordance with the TS EN ISO 6507-2, ASTM E384 ve ASTM E92 document. These values are based on indirect comparisons with hardness comparison plates. are the uncertainty values in the calibration. In direct calibration uncertainty values are also given. • Carried out at the customer's site
Hardness Test Equipment Vickers Hardness Test Equipment	HV1		%2,4	Calibration is performed according to the calibration procedure prepared in accordance with the TS EN ISO 6507-2, ASTM E384 ve ASTM E92 document. These values are based on indirect comparisons with hardness comparison plates. are the uncertainty values in the calibration. In direct calibration uncertainty values are also given. • Carried out at the customer's site
Hardness Test Equipment Vickers Hardness Test Equipment	HV2		%1,4	Calibration is performed according to the calibration procedure prepared in accordance with the TS EN ISO 6507-2, ASTM E384 ve ASTM E92 document. These values are based on indirect comparisons with hardness comparison plates. are the uncertainty values in the calibration. In direct calibration uncertainty values are also given. • Carried out at the customer's site

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Hardness Test Equipment Vickers Hardness Test Equipment	HV5		%1,0	Calibration is performed according to the calibration procedure prepared in accordance with the TS EN ISO 6507-2, ASTM E384 ve ASTM E92 document. These values are based on indirect comparisons with hardness comparison plates. are the uncertainty values in the calibration. In direct calibration uncertainty values are also given. • Carried out at the customer's site
Hardness Test Equipment Vickers Hardness Test Equipment	HV10		%1,0	Calibration is performed according to the calibration procedure prepared in accordance with the TS EN ISO 6507-2, ASTM E384 ve ASTM E92 document. These values are based on indirect comparisons with hardness comparison plates. are the uncertainty values in the calibration. In direct calibration uncertainty values are also given. • Carried out at the customer's site
Hardness Test Equipment Portable (Handheld) Hardness Test Equipment	30 ≤ *HRC* ≤ 64	Indirect calibration with hardness plates	1,8 HRC	Calibration is performed according to the calibration procedure prepared in accordance with the ISO 16859-2 document. • Carried out in laboratory or in customer’s site
Hardness Test Equipment Portable (Handheld) Hardness Test Equipment	550 ≤ *HLD* ≤ 850	Indirect calibration with hardness plates	18 HLD	Calibration is performed according to the calibration procedure prepared in accordance with the ISO 16859-2 document. • Carried out in laboratory or in customer’s site
Hardness Test Equipment Portable (Handheld) Hardness Test Equipment(With UCI method)	HV1	Indirect calibration with hardness plates	%2,4	Calibration is performed according to the calibration procedure prepared in accordance with the ASTM A 1038 document. • Carried out in laboratory or in customer’s site
Hardness Test Equipment Portable (Handheld) Hardness Test Equipment(With UCI method)	HV2	Indirect calibration with hardness plates	%1,4	Calibration is performed according to the calibration procedure prepared in accordance with the ASTM A 1038 document. • Carried out in laboratory or in customer’s site
Hardness Test Equipment Portable (Handheld) Hardness Test Equipment(With UCI method)	HV5	Indirect calibration with hardness plates	%1,0	Calibration is performed according to the calibration procedure prepared in accordance with the ASTM A 1038 document. • Carried out in laboratory or in customer’s site
Hardness Test Equipment Portable (Handheld) Hardness Test Equipment(With UCI method)	HV10	Indirect calibration with hardness plates	%1,0	Calibration is performed according to the calibration procedure prepared in accordance with the ASTM A 1038 document. • Carried out in laboratory or in customer’s site
Hardness Test Equipment Portable (Handheld) Hardness Test Equipment(With UCI method)	HRC	Indirect calibration with hardness plates	%0,5 HRC	Calibration is performed according to the calibration procedure prepared in accordance with the ASTM A 1038 document. • Carried out in laboratory or in customer’s site

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Hardness Test Equipment Shore hardness control plate	Shore A		0,6 Shore	Calibration is performed according to the calibration procedure prepared in accordance with the ISO 48-4, ISO 48-9 ve ISO 868 document. • Carried out in laboratory or in customer's site
Hardness Test Equipment Shore hardness control plate	Shore D		0,6 Shore	Calibration is performed according to the calibration procedure prepared in accordance with the ISO 48-4, ISO 48-9 ve ISO 868 document. • Carried out in laboratory or in customer's site
Hardness Test Equipment Shore Hardness Test Equipment	Shore A Shore D Shore AO Shore AM Shore B Shore C Shore DO Shore E Shore M Shore O Shore OO Shore OOO Shore OOO-S	Sinking Depth Force Diameter Radius Angle Hardness	2,0 µm %0,09 2,0 µm 2,0 µm 0,05° 0,5 Shore	Calibration is performed according to the calibration procedure prepared in accordance with the ISO 48-4, ISO 48-9, ISO 868 ve ASTM 2240 document. • Carried out in laboratory
Hardness Test Equipment IRHD Hardness Test Equipment	Method N,H,L	Sinking Depth Force End Diameter Presser Foot and Hole Diameter Hardness	2,0 µm %0,09 2,0 µm 20,0 µm 0,5 IRHD	Calibration is performed according to the calibration procedure prepared in accordance with the ISO 48-2 ve ISO 48-9 document. • Carried out at the customer's site
Hardness Test Equipment IRHD Hardness Test Equipment	Method M	Sinking Depth Force (8.3 mN) Force (145 mN-235 mN) End Diameter Presser Foot and Hole Diameter Hardness	0,4 µm %0,41 %0,08 1,0 µm 20,0 µm 0,5 IRHD	Calibration is performed according to the calibration procedure prepared in accordance with the ISO 48-2 ve ISO 48-9 document. • Carried out at the customer's site
Hardness Indenter Rockwell conical diamond (brale)	α = 120° R = 0,2 mm α = 0,5° S = 0,4 mm	Angle Radius Axiality Straightness	0,05° 5,0 µm 0,05° 1,0 µm	Calibration is performed according to the calibration procedure prepared in accordance with the TS EN ISO 6508-2 ve ASTM E18 document. • Carried out in laboratory
Hardness Indenter Vickers diamond pyramide	α = 148,11° / 136° α = 0,5°	Pyramid Angle Axis Misalignment	0,05°	Calibration is performed according to the calibration procedure prepared in accordance with the TS EN ISO 6507-2 ve ASTM E92 document. • Carried out in laboratory
Hardness Indenter Brinell ve Rockwell hard steel ball (B-E-F-G-H-K-L-M-PR- S-T-V-W-X-Y)	R = 1 - 1,5875 - 2,5- 3,175 - 5 - 6,35 -10 - 12,7 mm	Diameter of the Sphere	(0,4 + 4,6.L) µm	L : Measured Value [m] Calibration is performed according to the calibration procedure prepared in accordance with the TS EN ISO 6506-2 - TS EN ISO 6508-2 ve ASTM E10 - ASTM E18 document. • Carried out in laboratory

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Calibration and Measurement Capability (CMC)

Mechanical Quantities/Volume

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
Volumetric Apparatus Pipette (Piston)	1 µL ≤ *V* ≤ 3 µL	Single channel, Manual or motor-driven pipettes with piston movement (Type A and D1 pipettes, with digital and analogue display)	% 0,80	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-2, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Pipette (Piston)	3 µL < *V* ≤ 5 µL	Single channel, Manual or motor-driven pipettes with piston movement (Type A and D1 pipettes, with digital and analogue display)	% 0,60	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-2, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Pipette (Piston)	5 µL < *V* ≤ 10 µL	Single channel, Manual or motor-driven pipettes with piston movement (Type A and D1 pipettes, with digital and analogue display)	% 0,35	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-2, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Pipette (Piston)	10 µL < *V* ≤ 50 µL	Single channel, Manual or motor-driven pipettes with piston movement (Type A and D1 pipettes, with digital and analogue display)	% 0,30	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-2, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Pipette (Piston)	50 µL < *V* ≤ 5 mL	Single channel, Manual or motor-driven pipettes with piston movement (Type A and D1 pipettes, with digital and analogue display)	% 0,20	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-2, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.

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Volumetric Apparatus Pipette (Piston)	5 mL < *V* ≤ 20 mL	Single channel, Manual or motor-driven pipettes with piston movement (Type A and D1 pipettes, with digital and analogue display)	% 0,15	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-2, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Pipette (Piston)	2 µL	Multi channel, Manual or motor-driven pipettes with piston movement (Type A and D1 pipettes, with digital and analogue display)	% 2,6	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 8655-2, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Pipette (Piston)	2 µL < *V* ≤ 5 µL	Multi channel, Manual or motor-driven pipettes with piston movement (Type A and D1 pipettes, with digital and analogue display)	% 1,0	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-2, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Pipette (Piston)	5 µL < *V* ≤ 10 µL	Multi channel, Manual or motor-driven pipettes with piston movement (Type A and D1 pipettes, with digital and analogue display)	% 0,60	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-2, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Pipette (Piston)	10 µL < *V* ≤ 50 µL	Multi channel, Manual or motor-driven pipettes with piston movement (Type A and D1 pipettes, with digital and analogue display)	% 0,40	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-2, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Pipette (Piston)	50 µL < *V* ≤ 2 mL	Multi channel, Manual or motor-driven pipettes with piston movement (Type A and D1 pipettes, with digital and analogue display)	% 0,32	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-2, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.

Accreditation Scope

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Volumetric Apparatus Pipette (Piston)	5 µL	Single channel, Manual or motor-driven pipettes with piston movement (Type D2 pipettes, with digital and analogue display)	% 0,60	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-2, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Pipette (Piston)	5 µL < *V* ≤ 20 µL	Single channel, Manual or motor-driven pipettes with piston movement (Type D2 pipettes, with digital and analogue display)	% 0,40	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-2, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Pipette (Piston)	20 µL < *V* ≤ 100 µL	Single channel, Manual or motor-driven pipettes with piston movement (Type D2 pipettes, with digital and analogue display)	% 0,30	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-2, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Pipette (Piston)	100 µL < *V* ≤ 1 mL	Single channel, Manual or motor-driven pipettes with piston movement (Type D2 pipettes, with digital and analogue display)	% 0,25	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-2, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Glassware Syringes	1 µL ≤ *V* ≤ 10 µL	Piston motion by hand	% 1,5	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-9, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Glassware Syringes	10 µL < *V* ≤ 2 mL	Piston motion by hand	% 1,4	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-9, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.

Calibration
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Volumetric Glassware Syringes	2 mL < *V* ≤ 200 mL	Piston motion by hand	% 1,2	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-9, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Glassware Burette (with Piston) -	*V* ≤ 1 mL	Piston motion by hand	% 0,17	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-3, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Glassware Burette (with Piston) -	1 mL < *V* ≤ 2 mL	Piston motion by hand	% 0,11	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-3, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Glassware Burette (with Piston) -	2 mL < *V* ≤ 10 mL	Piston motion by hand	% 0,08	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-3, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Glassware Burette (with Piston) -	10 mL < *V* ≤ 100 mL	Piston motion by hand	% 0,06	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-3, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Glassware Burette (with Piston) -	*V* ≤ 1 mL	Piston motion by motorized	% 0,17	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-3, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.

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Volumetric Glassware Burette (with Piston) -	1 mL < *V* ≤ 2 mL	Piston motion by motorized	% 0,12	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-3, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Glassware Burette (with Piston) -	2 mL < *V* ≤ 5 mL	Piston motion by motorized	% 0,08	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-3, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Glassware Burette (with Piston) -	5 mL < *V* ≤ 25 mL	Piston motion by motorized	% 0,06	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-3, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Glassware Burette (with Piston) -	25 mL < *V* ≤ 100 mL	Piston motion by motorized	% 0,05	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-3, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Dispenser	10 µL	Single-stroke dispensers	% 0,55	The values given in the range column are nolimal values. According to the calibration procedure prepared in accordance with ISO 8655-5, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Dispenser	10 µL < *V* ≤ 20 µL	Single-stroke dispensers	% 0,45	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-5, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.

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Volumetric Apparatus Dispenser	20 µL < *V* ≤ 50 µL	Single-stroke dispensers	% 0,35	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-5, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Dispenser	50 µL < *V* ≤ 100 µL	Single-stroke dispensers	% 0,31	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-5, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Dispenser	100 µL < *V* ≤ 200 µL	Single-stroke dispensers	% 0,22	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-5, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Dispenser	200 µL < *V* ≤ 500 µL	Single-stroke dispensers	% 0,20	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-5, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Dispenser	500 µL < *V* ≤ 200 mL	Single-stroke dispensers	% 0,14	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-5, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Dispenser	1 µL ≤ *V* ≤ 2 µL	Multiple-delivery dispensers	% 1,3	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-5, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.

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Volumetric Apparatus Dispenser	2 µL < *V* ≤ 3 µL	Multiple-delivery dispensers	% 0,80	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-5, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Dispenser	3 µL < *V* ≤ 10 µL	Multiple-delivery dispensers	% 0,60	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-5, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Dispenser	10 µL < *V* ≤ 20 µL	Multiple-delivery dispensers	% 0,50	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-5, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Dispenser	20 µL < *V* ≤ 50 µL	Multiple-delivery dispensers	% 0,30	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-5, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Dispenser	50 µL < *V* ≤ 200 µL	Multiple-delivery dispensers	% 0,25	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-5, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Dispenser	200 µL < *V* ≤ 500 µL	Multiple-delivery dispensers	% 0,23	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-5, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.

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Volumetric Apparatus Dispenser	500 µL < *V* ≤ 1 mL	Multiple-delivery dispensers	% 0,20	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-5, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Dispenser	1 mL < *V* ≤ 2 mL	Multiple-delivery dispensers	% 0,16	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-5, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Dispenser	2 mL < *V* ≤ 25 mL	Multiple-delivery dispensers	% 0,12	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-5, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Apparatus Dispenser	25 mL < *V* ≤ 200 mL	Multiple-delivery dispensers	% 0,10	*V*: Nominal Volume According to the calibration procedure prepared in accordance with ISO 8655-5, ISO 8655-6 and ISO/TR 20461 documents • in Laboratory calibration is done. Declared uncertainty are the value at 100% of the nominal volume.
Volumetric Glassware Volumetric Flask	1 mL ≤ V ≤ 10 mL	Filling Glassware	8 µL	*V*: Measured Volume The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 1042, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Volumetric Flask	20 mL	Filling Glassware	12 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 1042, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.

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Volumetric Glassware Volumetric Flask	25 mL	Filling Glassware	12 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 1042, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Volumetric Flask	50 mL	Filling Glassware	18 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 1042, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Volumetric Flask	100 mL	Filling Glassware	28 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 1042, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Volumetric Flask	200 mL	Filling Glassware	40 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 1042, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Volumetric Flask	250 mL	Filling Glassware	40 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 1042, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Volumetric Flask	500 mL	Filling Glassware	70 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 1042, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.

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Volumetric Glassware Volumetric Flask	1000 mL	Filling Glassware	0,10 mL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 1042, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Volumetric Flask	2000 mL	Filling Glassware	0,16 mL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 1042, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Volumetric Flask	5000 mL	Filling Glassware	0,34 mL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 1042, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Volumetric Flask	10 mL	Filling Plasticware	12 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 5215, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Volumetric Flask	25 mL	Filling Plasticware	12 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 5215, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Volumetric Flask	50 mL	Filling Plasticware	18 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 5215, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.

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Volumetric Glassware Volumetric Flask	100 mL	Filling Plasticware	26 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 5215, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Volumetric Flask	250 mL	Filling Plasticware	42 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 5215, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Volumetric Flask	500 mL	Filling Plasticware	70 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 5215, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Volumetric Flask	1000 mL	Filling Plasticware	0,12 mL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 5215, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Graduated Cylinder -	5 mL	Filling Glassware	16 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 4788, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Graduated Cylinder -	10 mL	Filling Glassware	30 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 4788, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.

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Volumetric Glassware Graduated Cylinder -	25 mL	Filling Glassware	62 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 4788, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Graduated Cylinder -	50 mL	Filling Glassware	0,12 mL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 4788, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Graduated Cylinder -	100 mL	Filling Glassware	0,14 mL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 4788, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Graduated Cylinder -	250 mL	Filling Glassware	0,26 mL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 4788, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Graduated Cylinder -	500 mL	Filling Glassware	0,60 mL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 4788, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Graduated Cylinder -	1000 mL	Filling Glassware	1,2 mL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 4788, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.

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Volumetric Glassware Graduated Cylinder -	2000 mL	Filling Glassware	2,4 mL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 4788, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Graduated Cylinder -	10 mL	Filling Plasticware	32 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 6706, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Graduated Cylinder -	25 mL	Filling Plasticware	0,16 mL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 6706, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Graduated Cylinder -	50 mL	Filling Plasticware	0,30 mL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 6706, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Graduated Cylinder -	100 mL	Filling Plasticware	0,32 mL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 6706, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Graduated Cylinder -	250 mL	Filling Plasticware	0,64 mL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 6706, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.

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Volumetric Glassware Graduated Cylinder -	500 mL	Filling Plasticware	1,6 mL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 6706, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Graduated Cylinder -	1000 mL	Filling Plasticware	3,2 mL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 6706, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Graduated Cylinder -	2000 mL	Filling Plasticware	6,6 mL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 6706, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Graduated Cylinder -	4000 mL	Filling Plasticware	16 mL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 6706, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Pipette (Graduated)	0,1 mL ≤ *V* ≤ 0,5 mL	Emptying Glassware	1,8 µL	*V:* Measured Volume The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 835, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Pipette (Graduated)	1 mL	Emptying Glassware	2,2 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 835, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.

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Volumetric Glassware Pipette (Graduated)	2 mL	Emptying Glassware	3,0 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 835, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Pipette (Graduated)	5 mL	Emptying Glassware	9,0 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 835, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Pipette (Graduated)	10 mL	Emptying Glassware	15 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 835, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Pipette (Graduated)	20 mL	Emptying Glassware	30 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 835, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Pipette (Graduated)	25 mL	Emptying Glassware	30 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 835, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Pipette (Monosize)	0,5 mL	Emptying Glassware	1,4 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 648, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.

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Volumetric Glassware Pipette (Monosize)	1 mL	Emptying Glassware	2,4 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 648, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Pipette (Monosize)	2 mL	Emptying Glassware	3,2 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 648, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Pipette (Monosize)	5 mL	Emptying Glassware	4,2 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 648, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Pipette (Monosize)	10 mL	Emptying Glassware	6,0 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 648, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Pipette (Monosize)	25 mL	Emptying Glassware	8,0 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 648, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Pipette (Monosize)	50 mL	Emptying Glassware	12 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 648, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.

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Volumetric Glassware Pipette (Monosize)	100 mL	Emptying Glassware	20 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 648, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Pipette (Monosize)	200 mL	Emptying Glassware	30 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 648, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Burette	1 mL	Emptying Glassware	1,8 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 385, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Burette	2 mL	Emptying Glassware	3,2 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 385, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Burette	5 mL	Emptying Glassware	3,2 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 385, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Burette	10 mL	Emptying Glassware	6,0 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 385, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.

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Volumetric Glassware Burette	25 mL	Emptying Glassware	10 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 385, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Burette	50 mL	Emptying Glassware	16 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 385, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Burette	100 mL	Emptying Glassware	32 µL	The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 385, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Pycnometer	1 mL ≤ *V* ≤ 100 mL	Gay-Lussac	7,6 µL	*V:* Measured Volume The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 3507, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Pycnometer	10 mL ≤ *V* ≤ 100 mL	Reischauer	4,4 µL	*V:* Measured Volume The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 3507, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Pycnometer	25 mL ≤ *V* ≤ 50 mL	Hubbard	32 µL	*V:* Measured Volume The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 3507, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.

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Volumetric Glassware Pycnometer	10 mL ≤ *V* ≤ 100 mL	Ground-in thermometer	10 µL	*V*: Measured Volume The values given in the measuring range column are the nominal volume of the device. According to the calibration procedure prepared in accordance with ISO 3507, ISO 384, ISO 4787 and EURAMET cg.19 documents • in Laboratory calibration is done.
Volumetric Glassware Standard Capacity Measures, Volumetric Scales,, Liter Caps,, Fuel Mobile Scales,, Large Proving Tanks	1 L	Filling or Discharging	0,35 mL	The values given in the measuring range column are the nominal volume of the device. Calibration is performed by (*) Volumetric method according to the calibration procedure prepared in accordance with EURAMET cg.21 document. • Carried out in laboratory or in customer's site
Volumetric Glassware Standard Capacity Measures, Volumetric Scales,, Liter Caps,, Fuel Mobile Scales,, Large Proving Tanks	2 L	Filling or Discharging	0,62 mL	The values given in the measuring range column are the nominal volume of the device. Calibration is performed by (*) Volumetric method according to the calibration procedure prepared in accordance with EURAMET cg.21 document. • Carried out in laboratory or in customer's site
Volumetric Glassware Standard Capacity Measures, Volumetric Scales,, Liter Caps,, Fuel Mobile Scales,, Large Proving Tanks	5 L	Filling or Discharging	1,03 mL	The values given in the measuring range column are the nominal volume of the device. Calibration is performed by (*) Volumetric method according to the calibration procedure prepared in accordance with EURAMET cg.21 document. • Carried out in laboratory or in customer's site
Volumetric Glassware Standard Capacity Measures, Volumetric Scales,, Liter Caps,, Fuel Mobile Scales,, Large Proving Tanks	10 L	Filling or Discharging	1,3 mL	The values given in the measuring range column are the nominal volume of the device. Calibration is performed by (*) Volumetric method according to the calibration procedure prepared in accordance with EURAMET cg.21 document. • Carried out in laboratory or in customer's site
Volumetric Glassware Standard Capacity Measures, Volumetric Scales,, Liter Caps,, Fuel Mobile Scales,, Large Proving Tanks	20 L	Filling or Discharging	2,3 mL	The values given in the measuring range column are the nominal volume of the device. Calibration is performed by (*) Volumetric method according to the calibration procedure prepared in accordance with EURAMET cg.21 document. • Carried out in laboratory or in customer's site

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Volumetric Glassware Standard Capacity Measures, Volumetric Scales,, Liter Caps,, Fuel Mobile Scales,, Large Proving Tanks	50 L	Filling or Discharging	5,1 mL	The values given in the measuring range column are the nominal volume of the device. Calibration is performed by (*) Volumetric method according to the calibration procedure prepared in accordance with EURAMET cg.21 document. • Carried out in laboratory or in customer's site

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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Calibration and Measurement Capability (CMC)

Mechanical Quantities/Torque

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
Torque Measurement Devices Torque Converter (Torque Sensor / Torque Calibrator)	1 N·m ≤ *M* ≤ 1000 N·m	1st class and coarser torque sensors with Reference arms and dead weights (Clockwise and anticlockwise)	%0,2	*M* : Measured Torque (N.m) Calibration is performed according to the calibration procedure prepared in accordance with the EURAMET cg.14 document. • Carried out in laboratory or in customer's site
Torque Measurement Devices Torque Multiplier	100 N.m ≤ *M* ≤ 2000 N.m	0.5 Class Load Cell with Reference Moment Arms (Clockwise)	%0,8	*M* : Measured Torque (N.m) In accordance with the calibration procedure defined in the in-house method (SOP 3-9-05 Rev.00) document. • Carried out in laboratory
Torque Measurement Devices Lid/Cap Opening-Closing Torque Device Torque Sensor	1 N.m ≤ *M* ≤ 50 N.m	Reference Moment Arm and With Dead Weight	%0,4	*M* : Measured Torque (N.m) In accordance with the calibration procedure defined in the in-house method (SOP 3-9-03 Rev.00) document. • Carried out in laboratory
Torque Measurement Devices Torque Hand Tools	0,2 N.m ≤ *M* ≤ 813 N.m	With 1st Class Torque Sensor (Clockwise and anticlockwise)	%0,6	*M* : Measured Torque (N.m) Calibration is performed according to the calibration procedure prepared in accordance with the ISO 6789-2 document. • Carried out in laboratory
Torque Measurement Devices Torque Hand Tools	100 N.m ≤ *M* ≤ 2000 N.m	0.5 Class Load Cell with (Clockwise and anticlockwise)	%0,7	*M* : Measured Torque (N.m) Calibration is performed according to the calibration procedure prepared in accordance with the ISO 6789-2 document. • Carried out in laboratory
Torque Measurement Devices Continuous rotation torque tool Rotary tools for threaded fasteners Electric torque tool Pneumatic torque tool Hydraulic torque tool Torque wrench	0,5 N·m ≤ *M* ≤ 450 N·m	With 1st Class Torque Sensor (Clockwise and anticlockwise)	% 1,3	*M* : Measured Torque (N.m) In accordance with the calibration procedure defined in the in-house method (SOP 3-9-04 Rev.00) document. • Carried out in laboratory • Carried out at the customer's site

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Calibration and Measurement Capability (CMC)

Mechanical Quantities/Density

Ölçüm Büyüklüğü / Kalibre Edilen Cihazlar	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
Hydrometer (Density measuring device) Specific Gravity (Relative Density) Hydrometers	600 kg/m^3 ≤ ρ ≤ 2000 kg/m^3	Hydrostatics Weighing Management (Cuckow)	0,4 kg/m^3	Calibration is performed according to the calibration procedure prepared in accordance with the NIST SP 250-78 document. • Carried out in laboratory
Hydrometer (Density measuring device) Bomehydrometer	0-70 °Be	Hydrostatics Weighing Management (Cuckow)	0,2 °Be	Calibration is performed according to the calibration procedure prepared in accordance with the NIST SP 250-78 document. • Carried out in laboratory
Hydrometer (Density measuring device) Alcoholimeter (% Hydrometers)	0-100 %	Hydrostatics Weighing Management (Cuckow)	0,025 %	Calibration is performed according to the calibration procedure prepared in accordance with the NIST SP 250-78 document. • Carried out in laboratory

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Calibration and Measurement Capability (CMC)

Mechanical Quantities/Mass (Mass Standards)

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
Weight Standard E2 Standard Weights	1 mg ≤ *m* ≤ 20 mg	-	0,003 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard E2 Standard Weights	50 mg		0,004 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard E2 Standard Weights	100 mg		0,005 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard E2 Standard Weights	200 mg		0,006 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard E2 Standard Weights	500 mg		0,008 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard E2 Standard Weights	1 g		0,010 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard E2 Standard Weights	2 g		0,012 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard E2 Standard Weights	5 g		0,016 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard E2 Standard Weights	10 g		0,020 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory

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Weight Standard E2 Standard Weights	20 g		0,025 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard E2 Standard Weights	50 g		0,030 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard E2 Standard Weights	100 g		0,05 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard E2 Standard Weights	200 g		0,10 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard E2 Standard Weights	500 g		0,25 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard E2 Standard Weights	1 kg		0,5 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard E2 Standard Weights	2 kg		1,0 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard E2 Standard Weights	5 kg		2,5 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F1 Standard Weights	1 mg ≤ m ≤ 5 mg		0,006 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F1 Standard Weights	10 mg		0,008 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F1 Standard Weights	20 mg		0,010 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory

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Weight Standard F1 Standard Weights	50 mg		0,012 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F1 Standard Weights	100 mg		0,016 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F1 Standard Weights	200 mg		0,020 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F1 Standard Weights	500 mg		0,025 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F1 Standard Weights	1 g		0,03 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F1 Standard Weights	2 g		0,04 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F1 Standard Weights	5 g		0,05 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F1 Standard Weights	10 g		0,06 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F1 Standard Weights	20 g		0,08 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F1 Standard Weights	50 g		0,10 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F1 Standard Weights	100 g		0,16 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory

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Weight Standard F1 Standard Weights	200 g		0,30 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F1 Standard Weights	500 g		0,80 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F1 Standard Weights	1 kg		1,6 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F1 Standard Weights	2 kg		3,0 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F1 Standard Weights	5 kg		8,0 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F1 Standard Weights	10 kg		16 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F1 Standard Weights	20 kg		30 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F1 Standard Weights	50 kg		80 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F2 Standard Weights	1 mg ≤ m ≤ 5 mg		0,020 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F2 Standard Weights	10 mg		0,025 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F2 Standard Weights	20 mg		0,03 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory

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Weight Standard F2 Standard Weights	50 mg		0,04 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F2 Standard Weights	100 mg		0,05 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F2 Standard Weights	200 mg		0,06 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F2 Standard Weights	500 mg		0,08 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F2 Standard Weights	1 g		0,10 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F2 Standard Weights	2 g		0,12 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F2 Standard Weights	5 g		0,16 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F2 Standard Weights	10 g		0,20 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F2 Standard Weights	20 g		0,25 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F2 Standard Weights	50 g		0,30 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F2 Standard Weights	100 g		0,50 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory

Accreditation Scope

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Weight Standard F2 Standard Weights	200 g		1,0 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F2 Standard Weights	500 g		2,5 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F2 Standard Weights	1 kg		5,0 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F2 Standard Weights	2 kg		10 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F2 Standard Weights	5 kg		25 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F2 Standard Weights	10 kg		50 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F2 Standard Weights	20 kg		100 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard F2 Standard Weights	50 kg		250 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M1 Standard Weights	1 mg ≤ m ≤ 5 mg		0,06 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M1 Standard Weights	10 mg		0,08 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M1 Standard Weights	20 mg		0,10 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory

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Weight Standard M1 Standard Weights	50 mg		0,12 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M1 Standard Weights	100 mg		0,16 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M1 Standard Weights	200 mg		0,20 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M1 Standard Weights	500 mg		0,25 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M1 Standard Weights	1 g		0,30 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M1 Standard Weights	2 g		0,40 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M1 Standard Weights	5 g		0,50 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M1 Standard Weights	10 g		0,60 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M1 Standard Weights	20 g		0,80 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M1 Standard Weights	50 g		1,0 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M1 Standard Weights	100 g		1,6 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory

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Weight Standard M1 Standard Weights	200 g		3,0 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M1 Standard Weights	500 g		8,0 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M1 Standard Weights	1 kg		16 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M1 Standard Weights	2 kg		30 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M1 Standard Weights	5 kg		80 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M1 Standard Weights	10 kg		160 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory or in customer's site
Weight Standard M1 Standard Weights	20 kg		300 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory or in customer's site
Weight Standard M1 Standard Weights	50 kg		800 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory or in customer's site
Weight Standard M2 Standard Weights	100 mg		0,50 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M2 Standard Weights	200 mg		0,60 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M2 Standard Weights	500 mg		0,80 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M2 Standard Weights	1 g		1,0 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory

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Weight Standard M2 Standard Weights	2 g		1,2 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M2 Standard Weights	5 g		1,6 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M2 Standard Weights	10 g		2,0 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M2 Standard Weights	20 g		2,5 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M2 Standard Weights	50 g		3,0 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M2 Standard Weights	100 g		5,0 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M2 Standard Weights	200 g		10 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M2 Standard Weights	500 g		25 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M2 Standard Weights	1 kg		50 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M2 Standard Weights	2 kg		100 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M2 Standard Weights	5 kg		250 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory or in customer's site

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Weight Standard M2 Standard Weights	10 kg		500 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory or in customer's site
Weight Standard M2 Standard Weights	20 kg		1000 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory or in customer's site
Weight Standard M2 Standard Weights	50 kg		2500 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory or in customer's site
Weight Standard M3 Standard Weights	1 g		3,0 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M3 Standard Weights	2 g		4,0 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M3 Standard Weights	5 g		5,0 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M3 Standard Weights	10 g		6,0 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M3 Standard Weights	20 g		8,0 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M3 Standard Weights	50 g		10 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M3 Standard Weights	100 g		16 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M3 Standard Weights	200 g		30 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory
Weight Standard M3 Standard Weights	500 g		80 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory

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Weight Standard M3 Standard Weights	1 kg		160 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory or in customer's site
Weight Standard M3 Standard Weights	2 kg		300 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory or in customer's site
Weight Standard M3 Standard Weights	5 kg		800 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory or in customer's site
Weight Standard M3 Standard Weights	10 kg		1600 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory or in customer's site
Weight Standard M3 Standard Weights	20 kg		3000 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory or in customer's site
Weight Standard M3 Standard Weights	50 kg		8000 mg	Calibration is performed by determining the conventional mass value with the calibration procedure prepared in accordance with the OIML R-111 document. • Carried out in laboratory or in customer's site
Non-Standard Mass	$1\ g \leq m < 1\ kg$		1,8 mg	Calibration is performed by determining the conventional mass value by weighing on the balance with reference to the F1 class mass. • Carried out in laboratory
Non-Standard Mass	$1\ kg \leq m \leq 5\ kg$		4,0 mg	Calibration is performed by determining the conventional mass value by weighing on the balance with reference to the F1 class mass. • Carried out in laboratory
Non-Standard Mass	$5\ kg < m \leq 20\ kg$		30 mg	Calibration is performed by determining the conventional mass value by weighing on the balance with reference to the F1 class mass. • Carried out in laboratory
Non-Standard Mass	$20\ kg < m \leq 51\ kg$		100 mg	Calibration is performed by determining the conventional mass value by weighing on the balance with reference to the F1 class mass. • Carried out in laboratory

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Calibration and Measurement Capability (CMC)

Mechanical Quantities/Material Testing Machines

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
Material Testing Machines Tensile / Compression Testing Machine Compression Testing Machine Tensile Testing Machine	0,01 N ≤ *F* ≤ 1000 N	Dead Weight Pulling Direction	%0,10	Calibration is performed according to the calibration procedure prepared in accordance with TS EN ISO 7500-1, ISO 7500-1 and ASTM E4 documents. • Carried out at the customer's site
Material Testing Machines Tensile / Compression Testing Machine Compression Testing Machine Tensile Testing Machine	100 N ≤ *F* ≤ 100 kN	With 0.5 Class Load Cell Tensile Direction	%0,16	Calibration is performed according to the calibration procedure prepared in accordance with TS EN ISO 7500-1, ISO 7500-1 and ASTM E4 documents. • Carried out at the customer's site
Material Testing Machines Tensile / Compression Testing Machine Compression Testing Machine Tensile Testing Machine	20 kN ≤ *F* ≤ 500 kN	Tension in compression with cage	%0,16	Calibration is performed according to the calibration procedure prepared in accordance with TS EN ISO 7500-1, ISO 7500-1 and ASTM E4 documents. • Carried out at the customer's site
Material Testing Machines Tensile / Compression Testing Machine Compression Testing Machine Tensile Testing Machine	10 N ≤ *F* ≤ 500 kN	0.5 class load cell in compression direction	%0,16	Calibration is performed according to the calibration procedure prepared in accordance with TS EN ISO 7500-1, ISO 7500-1 and ASTM E4 documents. • Carried out at the customer's site
Material Testing Machines Tensile / Compression Testing Machine Compression Testing Machine Tensile Testing Machine	200 kN ≤ *F* ≤ 3 MN	1 class load cell in compression direction	%0,32	Calibration is performed according to the calibration procedure prepared in accordance with TS EN ISO 7500-1, ISO 7500-1 and ASTM E4 documents. • Carried out at the customer's site
Extensometer	0,5 mm ≤ *L* ≤ 1000 mm	With Laser Interferometer	(0,7 + 1,5.*L*) µm	*L* : Measured Value [m] Calibration is performed according to the calibration procedure prepared in accordance with TS EN ISO 9513 ve ASTM E83 documents. • Carried out at the customer's site
Concrete Test Presses	200 kN ≤ *F* ≤ 3 MN	With 1st Class Load Cell	%0,32	Calibration is performed according to the calibration procedure prepared in accordance with TS EN 12390-4 documents. • Carried out at the customer's site

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Notch-Impact Tester Izod Impact Tester	0,5 J ≤ A_p ≤ 750 J	Force Pendulum Length Angle Time	%0,16 0,3 mm 0,1° 0,03 s	Measurement uncertainty for the following parameters is calculated: 1-Centre of impact 2-Potential energy 3-Indicator deviation Calibration is performed according to the calibration procedure prepared in accordance with TS EN ISO 148-2, ASTM E23 ve TS EN ISO 13802 documents. • Carried out at the customer's site
Spring Impact Test Hammer	0,1 J ≤ A_p ≤ 0,3 J	with spring impact test hammer calibrator	0,01 J	Calibration is performed according to the calibration procedure prepared in accordance with the TS EN 60068-2-75 document. • Carried out in laboratory
Spring Impact Test Hammer	0,3 J < A_p ≤ 2,0 J	with spring impact test hammer calibrator	0,015 J	Calibration is performed according to the calibration procedure prepared in accordance with the TS EN 60068-2-75 document. • Carried out in laboratory
Spring Impact Test Hammer Calibrator	0,1 J ≤ A_p ≤ 0,3 J	with spring impact test hammer calibrator calibration stand	0,007 J	Calibration is performed according to the calibration procedure prepared in accordance with the TS EN 60068-2-75 document. • Carried out in laboratory
Spring Impact Test Hammer Calibrator	0,3 J < A_p ≤ 2,0 J	with spring impact test hammer calibrator calibration stand	0,008 J	Calibration is performed according to the calibration procedure prepared in accordance with the TS EN 60068-2-75 document. • Carried out in laboratory
Material Testing Space in Machines Modification and Measurement Systems	0,5 mm ≤ L ≤ 1000 mm	With Laser Interferometer	(0,7 + 1,5.L) µm	L : Measured Value [m] Calibration is performed according to the calibration procedure prepared in accordance with ASTM E2309 documents. • Carried out at the customer's site
Material Testing Machines Feed Rate Calibration	0,05 mm/min ≤ v ≤ 500 mm/min	With Laser Interferometer Tensile-Compression Directions.	%0,17	Calibration is performed according to the calibration procedure prepared in accordance with ASTM E2658 documents. • Carried out at the customer's site

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Calibration and Measurement Capability (CMC)

Mechanical Quantities/Force

Measured Quantity / Calibrated Items	Range	Measurement Conditions	Expanded Measurement Uncertainty (k=2)	Remarks / Calibration Method
Force Measurement Devices Load Cell Force Converter Dynamometer Hand Scale Crane Scale	0,01 N ≤ *F* ≤ 1000 N	With standard masses (with dead weights) Tension / Compression direction	% 0,10	Calibration is performed according to the calibration procedure prepared in accordance with the DKD R 3-3 document. • Carried out in laboratory or in customer's site
Force Measurement Devices Load Cell Force Converter Dynamometer Hand Scale Crane Scale	0,1 kN ≤ *F* ≤ 50 kN	With 0.5 class load cell Tensile-Compression direction	% 0,16	Calibration is performed according to the calibration procedure prepared in accordance with the DKD R 3-3 document. • Carried out in laboratory or in customer's site
Force Measurement Devices Single Capacity Force Gauges	1 N ≤ *F* ≤ 50 kN	With 0.5 Class load cell	% 0,20	Calibration is performed using with loadcell the comparison method • Carried out in laboratory or in customer's site

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.