Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs,
Education and Research EAER

**State Secretariat for Economic Affairs SECO**
Swiss Accreditation Service SAS

# SCS Directory — Accreditation number: SCS 0145

| | |
|---|---|
| International standard: | ISO/IEC 17025:2017 |
| Swiss standard: | SN EN ISO/IEC 17025:2018 |

Metrology.ch SA
Rue du Pont 25
2300 La Chaux-de-Fonds

| | |
|---|---|
| Head: | Guillaume Tremblay |
| Responsible for MS: | Guillaume Epailly |
| Telephone: | +41 32 968 80 60 |
| E-Mail: | info@metrology.ch |
| Internet: | www.metrology.ch |
| Initial accreditation: | 09.05.2016 |
| Current accreditation: | 09.05.2026 to 08.05.2031 |
| Scope of accreditation see: | www.sas.admin.ch (Accredited bodies) |


## Scope of accreditation as of 09.05.2026

## Calibration laboratory for length, torque, mass (weights) and temperature

Calibration and Measurement Capability (CMC)

| Measured Quantity / Instrument or Gauge | Measurement Range | Measurement Conditions | Best Measurement Uncertainty ± [1)] | Remarks |
|---|---|---|---|---|
| **LENGTH** | | | | |
| **Plug gauge** | | | | |
| - Steel and carbide | Ø 0.05 mm to 10 mm | Diameter | 0.25 µm + 1.7 · $10^{-6}$ · $L$ | Horizontal measuring bench |
| - Steel and carbide | Up to Ø 250 mm | Diameter | 0.5 µm + 5 ·$10^{-6}$ · $L$ | |
| **Screw plug gauge** | | | | |
| - NIHS | Ø 0.3 mm to 1.4 mm (Pitch 0.08mm to 0.25 mm) | Simple pitch diameter | 1.9 µm | Horizontal measuring bench |
| - Steel and carbide | Ø 1 mm to 250 mm (Pitch 0.25 mm to 2.5 mm) | | 1.7 µm + 3 · $10^{-6}$ · $L$ | |



The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

## SCS Directory

## Accreditation number: SCS 0145

| Measured Quantity / Instrument or Gauge | Measurement Range | Measurement Conditions | Best Measurement Uncertainty ± [1)] | Remarks |
|---|---|---|---|---|
| **Radiated gauge / Spherical gauge** | | | | |
| - Carbide | Ø 0.1 mm to 5 mm | Diameter | 0.4 µm | Horizontal measuring bench |
| **Cylindrical ring gauge** | | | | |
| - Steel | Ø 1 mm to 180 mm | Diameter | 0.6 µm + 4 · $10^{-6}$ · $L$ | Horizontal measuring bench |
| | Up to Ø 400 mm | Diameter | 0.9 µm + 4.5 · $10^{-6}$ · $L$ | |
| **Threaded ring gauge** | | | | |
| | Ø 1.5 mm to 200 mm<br>Pitch 0,30 mm to 6 mm | Diameter | 2.8 µm + 1.2 · $10^{-6}$ · $L$ | Horizontal measuring bench |
| **Gap gauges** | 5 mm to 180 mm | | 0.6 µm + 4· $10^{-6}$ · $L$ | Horizontal measuring bench |
| **Probe indicator** | | **Scale interval** | | |
| - Dial | Up to 100 mm | 0.001 mm | 1.1 µm | Horizontal measuring bench |
| | | 0.010 mm | 1.6 µm | |
| - Digital display | Up to 50 mm | 0,0001 mm | 0,25 µm | Horizontal measurement bench with laser interferometer |
| | Up to 100 mm | 0.001 mm | 1.6 µm | Horizontal measuring bench |
| | | 0.010 mm | 1.7 µm | |
| | Up to 150 mm | 0.001 mm | 1.9 µm | |
| | | 0.010 mm | 2.0 µm | |
| Digital sensor | Up to 100 mm | 0,01 µm | 0,20 µm + 2,5·$10^{-6}$·$L$ | Horizontal measurement bench with laser interferometer |
| **Test indicator** | | **Scale interval** | | |
| - Dial | Up to 4 mm | 0.001 mm | 0.8 µm | Horizontal measuring bench |
| | | 0.002 mm | 0.8 µm | |
| | | 0.010 mm | 2.5 µm | |
| - Digital display | Up to 4 mm | 0.001 mm | 0.8 µm | Horizontal measuring bench |
| | | 0.010 mm | 2.5 µm | |



The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

## SCS Directory

## Accreditation number: SCS 0145

| Measured Quantity / Instrument or Gauge | Measurement Range | Measurement Conditions | Best Measurement Uncertainty ± [1)] | Remarks |
|---|---|---|---|---|
| **Micrometric stop** | | **Scale interval** | | |
| - Vernier scale | Up to 50 mm | 0.010 mm | $1.1\ \mu m + 1.0 \cdot 10^{-6} \cdot L$ | Horizontal measuring bench |
| - Digital display | Up to 50 mm | 0.001 mm | $0.8\ \mu m + 1.6 \cdot 10^{-6} \cdot L$ | Horizontal measuring bench |
| | | 0.010 mm | $1.1\ \mu m + 1.0 \cdot 10^{-6} \cdot L$ | |
| **External micrometer Standard / Special** | | **Scale interval** | | |
| - Vernier scale | Up to 300 mm | 0.001 mm | $1.3\ \mu m + 23 \cdot 10^{-6} \cdot L$ | |
| | | 0.002 mm | $2.0\ \mu m + 22 \cdot 10^{-6} \cdot L$ | |
| | | 0.005 mm | $3.0\ \mu m + 19 \cdot 10^{-6} \cdot L$ | |
| | | 0.010 mm | $4.5\ \mu m + 17 \cdot 10^{-6} \cdot L$ | |
| - Digital display | Up to 300 mm | 0.001 mm | $2.0\ \mu m + 21 \cdot 10^{-6} \cdot L$ | |
| | Up to 30 mm | 0.000 1 mm | $0.6\ \mu m + 14 \cdot 10^{-6} \cdot L$ | |
| **V-anvil micrometer** | | **Scale interval** | | |
| - Vernier scale | Up to 50 mm | 0.001 mm | $3\ \mu m + 7 \cdot 10^{-6} \cdot L$ | |
| | | 0.002 mm | $3\ \mu m + 7 \cdot 10^{-6} \cdot L$ | |
| | | 0.005 mm | $4\ \mu m + 5 \cdot 10^{-6} \cdot L$ | |
| | | 0.010 mm | $5\ \mu m + 4 \cdot 10^{-6} \cdot L$ | |
| - Digital display | Up to 50 mm | 0.001 mm | $3\ \mu m + 6 \cdot 10^{-6} \cdot L$ | |
| **Internal micrometer** | | **Scale interval** | | |
| - Vernier scale | 2 mm to 150 mm | 0.001 mm | | |
| | | 0.002 mm | $4\ \mu m + 13 \cdot 10^{-6} \cdot L$ | |
| | | 0.005 mm | $4\ \mu m + 13 \cdot 10^{-6} \cdot L$ | |
| | | 0.010 mm | $4\ \mu m + 13 \cdot 10^{-6} \cdot L$ | |
| - Digital display | 2 mm to 150 mm | 0.001 mm | $4\ \mu m + 13 \cdot 10^{-6} \cdot L$ | |



The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

## SCS Directory

## Accreditation number: SCS 0145

| | | | | |
|---|---|---|---|---|
| **Caliper** | | **Scale interval** | | |
| - Dial | Up to 1000 mm | 0.01 mm | 6 µm + q + 17 · $10^{-6}$ · *L* | q = resolution |
| | | 0.02 mm | 6 µm + q + 17 · $10^{-6}$ · *L* | |
| - Vernier scale | Up to 1000 mm | 0.02 mm | 6 µm + q + 17 · $10^{-6}$ · *L* | |
| | | 0.05 mm | 5 µm + q + 10 · $10^{-6}$ · *L* | |
| - Digital display | Up to 1000 mm | 0.01 mm | 5 µm + q + 17 · $10^{-6}$ · *L* | |
| **Gauge blocks** | 0.5 mm to 100 mm | **Material** | | Gauge blocks bench |
| Central length | | Steel | 0.06 µm + 1.2 · $10^{-6}$ · *L* | |
| | | Ceramic | 0.06 µm + 1.2 · $10^{-6}$ · *L* | |
| | | Tungsten carbide | 0.06 µm + 1.3 · $10^{-6}$ · *L* | |
| Variation in length V with fo and fu | | | 0.04 µm | |
| | Up to 200 mm | **Material** | | Horizontal measuring bench |
| | | Steel | 0.2 µm + 0.3 · $10^{-6}$ ·*L* | |
| | | Ceramic | 0.2 µm + 0.3 · $10^{-6}$ · *L* | |
| | | Tungsten carbide | 0.2 µm + 0.3 · $10^{-6}$ · *L* | |
| Variation in length V with fo and fu | | | 0.2 µm | |
| | 200 mm to 500 mm | | | Horizontal measuring bench |
| Central length | | | 0.3 µm + 1.8 · $10^{-6}$ · *L* | |
| Variation in length V with fo and fu | | | 0.3 µm | |
| **Gauge blocks for micrometer** | Up to 500 mm | Tips Plans | 0.4 µm + 4.0 · $10^{-6}$ · *L* | Horizontal measuring bench |
| **Form** | | | | |
| Gauges / Ring gauges | $Ø_{int}$ 2 mm to 180 mm<br>$Ø_{ext}$ 1 mm to 250 mm | | | Form machine |
| Circularity | | | 0.15 µm | |
| Cylindricity | | | 0.25 µm | |
| Straightness | Height < 100 mm | | 0.20 µm | |



The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

## SCS Directory

## Accreditation number: SCS 0145

| **Gauges and Reference Parts** | (400 x 400 x 200) mm | Optical and tactile measurement | Calculated for a feature dimension of 100 mm | | Calibration on a 3D-coordinate measuring machine Uncertainty of measurement according to VDI 2617 sheet 11 |
|---|---|---|---|---|---|
| **Dimensions** | | | Tactile | Optical | |
| - Diameter | | | 1.1 µm | 1.5 µm | EN ISO 14405 |
| - Distance | | | 1.2 µm | 1.5 µm | EN ISO 14405 |
| - Angle | | | 0.0008° | 0.0015° | EN ISO 14405 |
| **Form** | | | | | |
| - Circularity | | | 1.3 µm | 2.0 µm | EN ISO 1101 |
| - Cylindricity | | | 1.6 µm | / | EN ISO 12181 |
| - Straightness | | | 1.0 µm | 1.8 µm | EN ISO 12180 |
| - Flatness | | | 1.2 µm | 1.4 µm | EN ISO 12780 |
| **Orientation** | | | | | |
| - Perpendicularity | | | 1.2 µm | 1.5 µm | EN ISO 1101 |
| - Parallelism | | | 1.2 µm | 1.0 µm | EN ISO 1101 |
| - Tilt | | | 1.2 µm | 1.3 µm | EN ISO 1101 |
| **Position** | | | | | |
| - Location | | | 1.1 µm | 1.6 µm | ISO 1101/5458 |
| - Coaxiality | | | 1.1 µm | 1.2 µm | ISO 1101 |
| **Run out** | | | | | |
| - Circular radial run-out | | | 1.7 µm | / | ISO 1101 |
| - Circular axial run-out | | | 1.3 µm | / | ISO 1101 |



The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

## SCS Directory

## Accreditation number: SCS 0145

| | | | | |
|---|---|---|---|---|
| **TORQUE** | | | | |
| **Torque wrenches** | | | | |
| - Fixed and with indicator | 1 N m to 1500 N m | Measuring bench with torque sensors | 0.6 % | In the laboratory and on-site EN ISO 6789-1 (2017) according to internal procedure |
| **Torque screwdriver** | | | | |
| - Fixed and with indicator | 0.02 N m to 10 N m | Measuring bench with torque sensors | 1.3 %, but not less than 0,006 N | In the laboratory and on-site EN ISO 6789-1 (2017) according to internal procedure |
| **Torque transducers torque sensors and torque measuring devices** | 0.005 N m to 1500 N m | With double levers horizontal and load weights | 0.040 % | BS EN 7882 :2017 |
| **Weighing instrument** | | | | In the laboratory and on-site |
| Calibration electronic weighing | Up to 10.1 kg | Euramet CG 18 With standard weight E2 | $1.5 \cdot 10^{-6}$<br>$8 \cdot 10^{-6}$ | - with device internal adjustment<br>- without a device internal adjustment |
| | Up to 75.1 kg | Euramet CG 18 With standard weight E2/F1 | $5 \cdot 10^{-6}$<br>$10 \cdot 10^{-6}$ | - with device internal adjustment<br>- without a device internal adjustment |
| | Up to 300.1 kg | Euramet CG 18 With standard weight M1 | $3.5 \cdot 10^{-5}$<br>$1.1 \cdot 10^{-4}$ | - with device internal adjustment<br>- without a device internal adjustment |



The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.

## SCS Directory

## Accreditation number: SCS 0145

| | | | | |
|---|---|---|---|---|
| **CONVENTIONAL MASS OF WEIGHTS** | 1 mg; 2mg; 5 mg | Substitution weighing | 0.0020 mg | Accuracy classes OIML R111 |
| | 10 mg | | 0.0025 mg | |
| | 20 mg; 50 mg | | 0.003 mg; 0.004 mg | |
| | 100 mg; 200 mg | | 0.005 mg; 0.006 mg | |
| | 500 mg | | 0.008 mg | |
| | 1 g; 2 g | | 0.010 mg; 0.012 mg | |
| | 5 g; 10 g | | 0.016 mg; 0.020 mg | |
| | 20 g; 50 g | | 0.025 mg; 0.030 mg | |
| | 100 g; 200 g | | 0.050 mg; 0.10 mg | |
| | 500 g; 1 kg | | 0.25 mg; 0.50 mg | |
| | 2 kg; 5 kg | | 1.0 mg; 2.5 mg | |
| | 10 kg; 20 kg | | 5.0 mg; 10 mg | |
| | Class M | Substitution weighing | | Accuracy classes OIML R111 |
| | 100 g<br>200 g<br>500 g<br>1 Kg<br>2 Kg<br>5 Kg<br>10 Kg<br>20 Kg<br>40 Kg<br>50 Kg | | 1,7 mg<br>3,0 mg<br>8,0 mg<br>16,0 mg<br>30,0 mg<br>80,0 mg<br>160,0 mg<br>300,0 mg<br>600 mg<br>800 mg | In the laboratory<br><br>On site |
| **Temperature** | | | | |
| Digital temperature sensor | -30 °C à 125 °C<br>< 125 à 165 °C | | 0,10 °C<br>0,16 °C | In the laboratory<br>on site |
| Climate chamber in ventilated temperature | -50 °C à 165 °C | Homogeneity measurement with PT100 probes | 0.20 °C | on-site |
| Climatic chamber in static temperature | -50 °C à 165 °C | Homogeneity measurement with PT100 probes | 0.30 °C | on-site |

In case of contradictions in the language versions of the directories, the French version shall apply.

* / * / * / * / *



The given extended measurement uncertainty is the standard uncertainty of the measurement multiplied by an extension factor k = 2, which corresponds to a confidence level of about 95% for a normal distribution.