



SCS Directory

Accreditation number: SCS 0001

International standard : ISO/CEI 17025:2017
Swiss standard : SN EN ISO/CEI 17025:2018

TESA Ilc
Calibration laboratories for di-
mensional measurements
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Internet : www.tesatechnology.com
Initial accreditation : 27.06.1994
Current accreditation : 21.09.2022 to 20.09.2027
Scope of accreditation see : www.sas.admin.ch
(Accredited bodies)

Scope of accreditation as of 21.09.2022

Calibration laboratory for dimensional measurements

Calibration and Measurement Capability (CMC)

Measured Quantity / Instrument or gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty \pm ¹⁾	Remarks
Length				
Gauge blocks according to ISO 3650				Comparison meas- urement on TESA UPC/UPD benches
- Steel	0,5 - 101,6 mm	Central length	0,06 $\mu\text{m} + 0,3 \cdot 10^{-6} \cdot L$	
- Ceramics	0,5 - 101,6 mm	Central length	0,05 $\mu\text{m} + 0,3 \cdot 10^{-6} \cdot L$	
- Tungsten carbide	0,5 - 101,6 mm	Central length	0,05 $\mu\text{m} + 0,2 \cdot 10^{-6} \cdot L$	
		Length variation v	0,02 μm	Differential mea- surement on 5 points
Gauge blocks	0,05 - 300 mm	Central length	0,8 $\mu\text{m} + 1,3 \cdot 10^{-6} \cdot L$	with horizontal bench



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Measured Quantity / Instrument or gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty \pm ¹⁾	Remarks
Height Gauges		Scale interval		
- Plunger in the axis	up to 100 mm	0,0001 mm	0,5 μm + $25 \cdot 10^{-6} \cdot L$ 0,4 μm + $3 \cdot 10^{-6} \cdot L$	with vertical bench with gauge blocks
- Plunger not in the axis	up to 100 mm	0,0001 mm	1,5 μm + $30 \cdot 10^{-6} \cdot L$ 1,2 μm	with vertical bench with gauge blocks
- Plunger not in the axis	up to 1000 mm	0,0001 mm	1,7 μm + $3 \cdot 10^{-6} \cdot L$	with step gauge
- Straightness / Perpendicularity	up to 1000 mm	0,0001 mm	1,9 μm + $2,4 \cdot 10^{-6} \cdot L$	with granite vertical planes
External micrometers		Scale interval		
- analogic or digital reading	up to 100 mm	0,001 mm 0,010 mm	1,8 μm + $0,8 \cdot 10^{-6} \cdot L$ 2,5 μm + $0,6 \cdot 10^{-6} \cdot L$	with gauge blocks
Dial gauges		Scale interval		
- analogic reading	0 - 13 mm	0,001 mm 0,002 mm 0,010 mm	0,8 μm 0,9 μm 2,1 μm	with horizontal bench
- analogic reading	13 - 100 mm	0,001 mm 0,002 mm 0,010 mm	1,0 μm 1,1 μm 2,1 μm	with horizontal bench
- digital reading	0 - 100 mm	0,001 mm 0,010 mm	1,3 μm 6,3 μm	with horizontal bench
Dial test indicators		Scale interval		
- analogic reading	0 - 3 mm	0,002 mm 0,010 mm	1,1 μm 2,0 μm	with horizontal bench



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Measured Quantity / Instrument or gauge	Measurement Range	Measurement Conditions	Best Measurement Uncertainty \pm ¹⁾	Remarks
Calipers		Scale interval		
- digital reading	up to 500 mm	0,010 mm	14 μm + $2 \cdot 10^{-6} \cdot L$	with gauge blocks
- analogic reading	up to 500 mm	0,020 mm	7 μm + $3 \cdot 10^{-6} \cdot L$	
		0,050 mm	17 μm + $1 \cdot 10^{-6} \cdot L$	
Depth calipers		Scale interval		
- digital reading	up to 500 mm	0,010 mm	15 μm + $2 \cdot 10^{-6} \cdot L$	with gauge blocks
- analogic reading	up to 500 mm	0,020 mm	12 μm + $2 \cdot 10^{-6} \cdot L$	
		0,050 mm	15 μm + $2 \cdot 10^{-6} \cdot L$	
3-Point Internal micrometers		Scale interval		
- analogic or digital reading	6 - 200 mm	0,001 mm	2,4 μm + $3,3 \cdot 10^{-6} \cdot L$	with ring gauges
		0,002 mm	2,4 μm + $3,3 \cdot 10^{-6} \cdot L$	
		0,005 mm	2,4 μm + $3,3 \cdot 10^{-6} \cdot L$	
		0,010 mm	2,4 μm + $3,3 \cdot 10^{-6} \cdot L$	
Adjustment gauges / Length gauges	25 - 275 mm	Central dimension	0,8 μm + $1,2 \cdot 10^{-6} \cdot L$	with horizontal bench
Ring gauges	3 - 10 mm	Internal dimensions	0,5 μm + $0,9 \cdot 10^{-6} \cdot L$	with horizontal bench
	10 - 205 mm	Internal dimensions	0,6 μm + $1,4 \cdot 10^{-6} \cdot L$	with horizontal bench
Plug gauges / Cylindrical revolutionary parts	0,15 - 180 mm	External dimensions	0,6 μm + $1,2 \cdot 10^{-6} \cdot L$	with horizontal bench
Ring gauges / plug gauges	3 - 150 mm	Roundness	0,9 μm	with roundness bench

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

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(1) 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