

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

VÍTKOVICE TESTING CENTER s. r. o.
CAB number 2285, Metrological Inspection Centre
Kotkova 431/4a, 703 00 Ostrava - Vítkovice

CMC for the field of measured quantity: Length

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the measurand	Lowest stated expanded measurement uncertainty ²	Calibration principle	Calibration procedure identification ³	Work-place
		min	unit	max	unit					
1	Length gauges and rules of measuring instruments	0 mm	to	6,000 mm		$(0.8 \cdot L + 0.14) \mu\text{m}$	Measurement by a laser interferometer	CI-300.25-015		
2*	Length gauges	0 mm	to	100 mm		$(1.0 \cdot L + 0.20) \mu\text{m}$	Measurement using parallel gauge blocks	CI-300.25-028		
3	Parallel gauge blocks	0.5 mm	to	100 mm		$(2.0 \cdot L + 0.10) \mu\text{m}$	Comparison with parallel gauge blocks in vertical position on a comparator	CI-300.25-020		
4	Parallel gauge blocks	100 mm	to	500 mm		$(3.8 \cdot L + 0.30) \mu\text{m}$	Comparison with parallel gauge blocks in horizontal position on a length gauge	CI-300.25-503		
5	Slide gauges	0 mm	to	500 mm		$(1 \cdot L + 8.5) \mu\text{m}$	Measurement using parallel gauge blocks	CI-300.25-021		
		500 mm	to	1,475 mm		$(2 \cdot L + 13) \mu\text{m}$	Measurement by check gauges			
		1,475 mm	to	3,000 mm		$(8 \cdot L + 13) \mu\text{m}$	Comparative measurement using inside micrometer gauges set on a length gauge			
6	Micrometer calliper gauges	0 mm	to	200 mm		$(2 \cdot L + 0.9) \mu\text{m}$	Measurement using parallel gauge blocks	CI-300.25-022		
		200 mm	to	500 mm		$(3 \cdot L + 1.0) \mu\text{m}$	Measurement by check gauges			
		500 mm	to	1,500 mm		$(3 \cdot L + 2.5) \mu\text{m}$				
		1,500 mm	to	3,000 mm		$(7 \cdot L + 3) \mu\text{m}$	Comparative measurement using inside micrometer gauges set on a length gauge			
7	Thickness gauges with dial indicator	0 mm	to	400 mm		3.4 μm	Measurement using parallel gauge blocks	CI-300.25-027		

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8	Inside micrometer gauges – total length	20 mm	to	1,000 mm		$(2.5 \cdot L + 1.2) \mu\text{m}$	Measurement on a universal length gauge	CI-300.25-023		
		1,000 mm	to	5,000 mm		$(6 \cdot L + 1.6) \mu\text{m}$				
9	Rigid check gauges and gauges with mounting	25 mm	to	1,000 mm		$(2 \cdot L + 0.3) \mu\text{m}$	Measurement on a universal length gauge	CI-300.25-030		
		1,000 mm	to	2,000 mm		$(8 \cdot L + 0.7) \mu\text{m}$				
10	Limit gauges, smooth	2 mm	to	250 mm		$(3 \cdot L + 0.5) \mu\text{m}$	Measurement on a universal length gauge	CI-300.25-043		
11	Feeler gauges	0.01 mm	to	2 mm		$(1 \cdot L + 1.3) \mu\text{m}$	Measurement on a universal length gauge	CI-300.25-131		
12	Thread gauges – male	2 mm	to	200 mm		2.8 μm	Indirect measurement on a length gauge using thread measuring wires	CI-300.25-127		
	Thread gauges – female	16 mm	to	130 mm		2.5 μm				
13	Dial indicators	0 mm	to	50 mm		0.48 μm	Direct measurement by calibration instruments for indicators	CI-300.25-046		
14	Roughness stylus instruments	0.1 μm	to	800 μm	Roughness Ra Roughness Rz Roughness RzISO Roughness Rmax Roughness Rt Roughness Pt	3.5 % 4.3 % 4.5 % 4.4 % 4.4 % 2.4 %	Measurement using reference roughness plates	CI-300.25-034		
	Roughness reference standards	0.1 μm	to	800 μm	Roughness Ra Roughness Rz	5.2 % 5.5 %				Contact measurement by a roughness meter

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						Roughness RzISO 5.5 % Roughness Rmax 5.5 % Roughness Rt 5.6 %				
15	Steel rules	0 m	to	3 m		(31·L + 41) μm	Comparison with a reference gauge	CI-300.25-004		
	Wooden rules	0 m	to	3 m		(30·L + 53) μm				
	Tape measures	0 m	to	10 m		(2·L + 260) μm				
16	Steel rules	0 mm	to	5,000 mm		(1·L + 10) μm	Measurement by a laser interferometer	CI-300.25-130		
17	Tape measures	0 mm	to	50 m		(10·L + 90) μm	Comparison with a reference tape measure	CI-300.25-024		
18	Micrometer depth gauges	0 mm	to	300 mm		(6·L + 0.8) μm	Measurement using parallel gauge blocks	CI-300.25-506		
	Depth gauges with dial indicator	0 mm	to	300 mm		(0.6·L + 11.6) μm				
19	Inside caliper gauge	100 mm	to	500 mm		(3·L + 2.5) μm	Measurement on a universal length gauge	CI-300.25-126		
	Inside micrometer	3 mm	to	200 mm		(1·L + 3.8) μm	Measurement by setting rings			
	Inside micrometer – two-contact	200 mm	to	300 mm		(1·L + 2.4) μm	Measurement using set gauges			
	Internal gauge with measuring arms – digital	2.5 mm	to	200 mm		(1·L + 12.2) μm	Measurement by setting rings			
	Internal gauge with measuring arms –with dial indicator	2.5 mm	to	200 mm		(1·L + 6.8) μm				
	Three-contact internal gauge	2 mm	to	200 mm		(2·L + 2.8) μm				
20	Weld gauges	0 mm	to	100 mm		10 μm	Measurement using parallel gauge blocks	CI-300.25-084		

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21	Instruments for thickness measurement of surface layers	0	μm	to	5,000	μm	(2.2·l + 2.2) μm	Measurement with calibration sheets	CI-300.25-087	
	Calibration sheets	5	μm	to	5,000	μm	(0.6·l + 0.4) μm	Measurement on a universal length gauge		
22*	Surface/ layout plates	250	mm	to	4,000	mm	2 M μm	Measurement by a laser interferometer	CI-300.25-048	
23	Pasameters and micropasameters	0	mm	to	300	mm	(1·L + 1.4) μm	Measurement using parallel gauge blocks	CI-300.25-510	
24	Thread-measuring wires	0.17	mm	to	10	mm	(1·L + 0.22) μm	Measurement on a universal length gauge	CI-300.25-504	
25	Flat and trying squares	0	mm	to	1	mm	Longer side up to 400 mm (1.4 L + 5.7) μm	Measurement on a calibration instrument for squares	CI-300.25-026	
	Angles with angle 120°	0	mm	to	1	mm	Longer side up to 160 mm 11 μm			
	Knife angles	0	mm	to	1	mm	Longer side up to 160 mm (1.2 L + 5.2) μm			

¹ Asterisk at the ordinal number identifies the calibrations, which the Laboratory is qualified to carry out outside the permanent laboratory premises.

² The expanded measurement uncertainty is in accordance with ILAC-P14 and EA-4/02 M a part of CMC and it is the lowest value of the respective uncertainty. If not stated otherwise, its coverage probability is approx. 95 %. If not stated otherwise, the uncertainty values stated without a unit are relative to the measured value. The uncertainty value stated herein is based on the best conditions achievable by the laboratory; the uncertainty value of a specific calibration may be higher depending on the conditions of such a calibration. For identical extreme values of adjacent ranges, the lower uncertainty value always applies.

³ If the document identifying the calibration procedure is dated, only these specific procedures are used. If the document identifying the calibration procedure is not dated, the latest edition of the specified procedure is used (including any changes).

Explanatory notes:

L ... Measured dimension in metres

l ... Measured dimension in millimetres

M ... Diagonal in metres

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CMC for the field of measured quantity: Plane angle

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the measurand	Lowest stated expanded measurement uncertainty ²	Calibration principle	Calibration procedure identification ³	Work-place
		min	unit	max	unit					
1	Angle gauges	0 °		to 360 °		0,9'	Measurement using angle gauges	CI-300.25-025		
2	Weld gauges – fixed angles	5 °		to 160 °		30'	Measuring with an optical angle gauge	CI-300.25-084		
	Weld gauges – angle gauge	0 °		to 180 °		30'	Measurement using angle gauges			
3	Builder's level	-8 mm/m		to 8 mm/m	up to 1 m	150 µm/m	Measurement using parallel gauge blocks on a check plate	CI-300.25-501		

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CMC for the field of measured quantity: Force, torque

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the measurand	Lowest stated expanded measurement uncertainty ²	Calibration principle	Calibration procedure identification ³	Work-place
		min	unit	max	unit					
1	Portable hardness testers	210 HV	to	720 HV	Vickers	1.6 %	Direct measurement on hardness reference standards	CI-300.25-051		
		200 HBW	to	660 HBW	Brinell	1.6 %				
		20 HRC	to	60 HRC	Rockwell	1.6 %				
		480 HLD	to	825 HLD	Leeb	1.6 %				
2	Torque / Torque wrenches and screwdrivers	0.2 Nm	to	30 Nm		1.0 %	Direct measurement on torque calibration instruments	CI-KMS I-41		
		30 Nm	to	5,000 Nm		0.7 %				

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CMC for the field of measured quantity: Temperature

Ord. number ¹	Calibrated quantity / Subject of calibration	Nominal range				Parameter(s) of the measurand	Lowest stated expanded measurement uncertainty ²	Calibration principle	Calibration procedure identification ³	Work-place
		min	unit	max	unit					
1	Resistance temperature sensors			0 °C		0.04 °C	Comparison with a reference resistance temperature sensor	CI-KMS I-01		
		30 °C	to	200 °C		0.15 °C				
		200 °C	to	400 °C		0.6 °C				
2	Thermocouple temperature sensors			0 °C		0.7 °C	Comparison with a reference thermocouple or resistance sensor	CI-KMS I-02		
		30 °C	to	200 °C		0.7 °C				
		200 °C	to	400 °C		1.0 °C				
		400 °C	to	1,100 °C		1.7 °C				
		1,100 °C	to	1,500 °C		3.0 °C				
3	Radiation thermometers (pyrometers)			100 °C		1.7 °C	Comparison with a reference thermometer / cavity, target black body	CI-KMS I-04		
		30 °C	to	400 °C		3.7 °C				
		400 °C	to	1,500 °C		4.0 °C				
4	Direct indicating thermometers			500 °C		1.9 °C	Comparison with a reference thermometer	CI-KMS I-03		

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