

Length

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Ukraine, NSC IM (National Scientific Centre "Institute of Metrology")

No	NDETU / DETU	Number of CMCs	KCDB CMC ID	Quantity	Instrument or Artifact	Method of Measurement	Parameters	Measurand	Uncertainty	Uncertainty Equation	Comments	Approval date	NMI Service Identifier
1	DETU 01-01-96	9	EURAMET-L-UA-000000Q3-1	Gear standards	Gear pitch master: total cumulative pitch deviation (Fp)	Special set	Gear diameter: 60 mm to 400 mm	[0.0 , 0.1] mm	1.8 µm (Absolute)			2005-01-10	NSC IM/19
2			EURAMET-L-UA-000000Q4-1	Gear standards	Gear pitch master: single pitch deviation (Fp)	Special set	Pitch diameter: 60 mm to 400 mm	[0.0 , 0.1] mm	1.5 µm (Absolute)			2005-01-10	NSC IM/20
3			EURAMET-L-UA-000000Q5-1	Gear standards	Gear lead master: slope deviation	Special set	Diameter: 25 mm to 200 mm Helix angle : 45 °	[-0.1 , 0.1] mm	[3.0 , 4.0] µm (Absolute)			2005-01-10	NSC IM/21
4			EURAMET-L-UA-000000Q6-1	Gear standards	Gear lead master: helix form deviation (ffb)	Special set	Diameter: 25 mm to 200 mm Helix angle : 45 °	[0.0 , 0.1] mm	2.0 µm (Absolute)			2005-01-10	NSC IM/22
5			EURAMET-L-UA-000000Q7-1	Gear standards	Gear involute master: involute profile slope deviation (fHa), (fa)	Special interferometer	Base circle diameter: 80 mm to 150 mm	[0.01 , 10.0] µm	0.5 µm (Absolute)			2005-01-10	NSC IM/23
6			EURAMET-L-UA-000000Q8-1	Gear standards	Involute gear: profile form deviation	CMM	Reference diameter: 25 mm to 400 mm	[0.0 , 100.0] µm	1.4 µm (Absolute)			2020-11-20	NSC IM-L-5.3.5/26
7			EURAMET-L-UA-000000Q9-1	Gear standards	Involute gear: profile deviation, total	CMM	Reference diameter: 25 mm to 400 mm	[0.0 , 100.0] µm	1.5 µm (Absolute)			2020-11-20	NSC IM-L-5.3.5/26
8			EURAMET-L-UA-000000QA-1	Gear standards	Involute gear: single pitch deviation	CMM	Reference diameter: 25 mm to 400 mm	[0.0 , 100.0] µm	1.4 µm (Absolute)			2020-11-20	NSC IM-L-5.3.5/28
9			EURAMET-L-UA-000000QB-1	Gear standards	Involute gear: cumulative pitch deviation, total	CMM	Reference diameter: 25 mm to 400 mm	[0.0 , 100.0] µm	2.3 µm (Absolute)			2020-11-20	NSC IM-L-5.3.5/28
10	DETU 01-03-98	16	EURAMET-L-UA-000000QF-1	Diameter standards	Internal cylinder (ring): diameter	1-D stylus comparator, gauge substitution	Maximum external size: 500 mm diameter	[1.0 , 150.0] mm	0.3 µm (Absolute)			2005-01-10	NSC IM/14
11			EURAMET-L-UA-000000QG-1	End standards	Gauge block: central length L	Mechanical comparison		[0.5 , 100.0] mm	[48.0 , 77.0] nm (Absolute)	Q[48, 0.6L] (L in mm)		2019-09-28	NSC IM-L-221/3
12			EURAMET-L-UA-000000QH-1	Length instruments	Length interferometer, error of indicated displacement L	Comparison to master length interferometer		[0.1 , 50.0] m	[0.35 , 25.3] µm (Absolute)	Q[0.3, 0.5L] (L in m The uncertainty is expressed in µm)		2005-01-10	NSC IM/3
13			EURAMET-L-UA-000000QI-1	End standards	Gauge block: central length L	Interferometry exact fractions		[0.1 , 100.0] mm	[20.0 , 40.0] nm (Absolute)	Q[20, 0.2L] (L in mm The uncertainty is expressed in nm)		2005-01-10	NSC IM/5
14			EURAMET-L-UA-000000QJ-1	End standards	Length bar (long gauge block): central length L	Interference lines counting		[100.0 , 1000.0] mm	[40.0 , 220.0] nm (Absolute)	Q[20, 0.2L] (L in mm The uncertainty is expressed in nm)		2005-01-10	NSC IM/6

15			EURAMET-L-UA-00000QK-1	Line standards	Line scale: line spacing L	Interferometry, photoelectric microscope	Artifact length: 1000 mm maximum Illumination: reflection only	[100.0 , 1000.0] mm	[50.0 , 320.0] nm (Absolute)	Q[20, 0.3L] (L in mm The uncertainty is expressed in nm)	modified on 25 February 2013	2005-01-10	NSC IM/7
16			EURAMET-L-UA-00000QL-1	Line standards	Stage micrometer: line spacing L	Interferometry, photoelectric microscope	Artifact length: 200 mm maximum Illumination: transmission or reflection	[0.01 , 200.0] mm	[20.0 , 80.0] nm (Absolute)	Q[20, 0.3L] (L in mm The uncertainty is expressed in nm)		2005-01-10	NSC IM/8
17			EURAMET-L-UA-00000QM-1	Line standards	Engineer or surveyor tape, steel: line spacing L	Laser interferometer	Support: on-flat	[0.001 , 50.0] m	[2.0 , 502.0] μ m (Absolute)	Q[2, 10L] (L in m The uncertainty is expressed in μ m)		2005-01-10	NSC IM/9
18			EURAMET-L-UA-00000QN-1	Line standards	Geodetic tape or wire invar: line spacing L	Laser interferometer	Support: on-flat	[0.001 , 30.0] m	[3.0 , 243.0] μ m (Absolute)	Q[3, 8L] (L in m The uncertainty is expressed in μ m)		2005-01-10	NSC IM/10
19			EURAMET-L-UA-00000QO-1	Line standards	Surveyor leveling rod: line spacing L	Laser interferometer	Support: horizontal on Airy points	[1.0 , 4.0] m	[7.0 , 22.0] μ m (Absolute)	Q[2, 5L] (L in m The uncertainty is expressed in μ m)		2005-01-10	NSC IM/11
20			EURAMET-L-UA-00000QP-1	Diameter standards	External cylinder (plug): diameter	1-D stylus comparator, gauge substitution		[1.0 , 500.0] mm	0.3 μ m (Absolute)			2005-01-10	NSC IM/12
21			EURAMET-L-UA-00000QQ-1	Diameter standards	Internal cylinder (ring): diameter L	Interferometry exact fractions	Ring's material: only transparent Form and size of rings: 20 mm x 20 mm x 8 mm to 150 mm x 150 mm x 60 mm	[3.0 , 100.0] mm	[0.02 , 0.05] μ m (Absolute)	Q[0.02, 0.5E-03L] (L in mm The uncertainty is expressed in μ m)		2005-01-10	NSC IM/13
22			EURAMET-L-UA-00000QR-1	Laser radiations	Frequency stabilized laser: vacuum wavelength	Optical beat frequency		633.0 nm	1.0E-9 (dimensionless) (Relative)			2005-01-10	NSC IM/2
23			EURAMET-L-UA-00000QS-1	Laser radiations	Frequency stabilized laser: absolute frequency	Optical beat frequency		474.0 THz	24.0 kHz (Absolute)			2005-01-10	NSC IM/1
24			EURAMET-L-UA-00000QT-1	Long distance	Geodetic baseline: interval distances L	Comparison to precision rangefinder	Distance: up to 1000 m	[24.0 , 5000.0] m	[0.11 , 1.35] mm (Absolute)	Q[0.1, 0.25E-03L] (L in m The uncertainty is expressed in mm)		2005-01-10	NSC IM/24
25			EURAMET-L-UA-00000QU-1	Long distance	Geodetic baseline: interval distances L	Comparison to precision rangefinder	Distance: above 1000 m	[24.0 , 5000.0] m	[0.16 , 1.65] mm (Absolute)	Q[0.15, E-03L] (L in m The uncertainty is expressed in mm)		2005-01-10	NSC IM/25
26		3	EURAMET-L-UA-00000QC-1	Flatness standards	Optical flat: flatness deviation over whole diameter	Fizeau interferometer and master flat	Maximum diameter: 280 mm Support mode: horizontal on 3 pads	[0.0 , 1000.0] nm	50.0 nm (Absolute)			2005-01-10	NSC IM/16
27			EURAMET-L-UA-00000QD-1	Roundness standards	Magnification stanart (e. g. f.kick standard): roundness	Stylus-on-spindle roundness instrument	Diameter: 1 mm to 300 mm	[0.0 , 300.0] μ m	[30.0 , 3036.0] nm (Absolute)	Q[36 10R] (R in mm The uncertainty is expressed in nm)		2016-11-09	NSC IM-L-423/22
28			EURAMET-L-UA-00000QE-1	Roundness standards	Sphere, hemisphere: roundness	Stylus-on-spindle roundness instrument	Diameter: 1 mm to 100 mm	[0.0 , 2000.0] nm	36.0 nm (Absolute)			2016-11-09	NSC IM-L-423/22