NÁRODNÍ AKREDITAČNÍ ORGÁN

EA MLA Signatory
Czech Accreditation Institute, Public Service Company
Olšanská 54/3, 130 00 Praha 3

issues

according to section 16 of Act No. 22/1997 Coll., on technical requirements for products, as amended

CERTIFICATE OF ACCREDITATION

No. **544 / 2013**

František Knížek
with registered office Antonína Dvořáka 719, 533 41 Lázně Bohdaneč

to the Calibration Laboratory No. **2290**
František Knížek - KALEX, kalibrační středisko

Scope of accreditation:

Calibration of meters in the field of length, plane angle, temperature, pressure, mass and moment of force to the extent as specified in the appendix to this Certificate which is attached.

This Certificate of Accreditation is a proof of Accreditation issued on the basis of assessment of fulfillment of the accreditation criteria in accordance with

ČSN EN ISO/IEC 17025:2005

In its activities performed within the scope and for the period of validity of this Certificate, the Body is entitled to refer to this Certificate, provided that the accreditation is not suspended and the Body meets the specified accreditation requirements in accordance with the relevant regulations applicable to the activity of an accredited Conformity Assessment Body.

The Certificate of Accreditation is valid until: **2 October 2018**

The Certificate of Accreditation becomes effective on the date of its delivery to the Conformity Assessment Body.

Prague: 2 October 2013

Český institut pro akreditaci, o.p.s.
-2-

Jiří Růžička
Director
Czech Accreditation Institute
Public Service Company

Accredited entity according to ČSN EN ISO/IEC 17025:2005:

František Knížek
Antonína Dvořáka 609, 533 41 Lázně Bohdaneč

Testing laboratory working site:

1. František Knížek – KALEX, kalibrační středisko, A.Dvořáka 719, Lázně Bohdaneč

Field of measured quantity: Length

Calibration:

Nominal calibration temperature: (20 ± 1) °C
Nominal calibration temperature outside the permanent premises: (20 ± 10) °C

Ordinal number [1]	Measured quantity	Measured quantity range	Best measuring ability [±] [2]	Method identification
1	Steel parallels	(0.5 – 100) mm (125 – 500) mm	(0.26 + 2L) µm (0.3 + 2.2L) µm	KPA-1.01
2	Slide gauges	(0 – 3000) mm	(11 + 8.7L) µm	KPA-1.02
3	Micrometers for external measurement: Micrometer calliper gauges Pasameters Micropasameters	(0 – 500) mm	 (1 + 3L) µm (1 + 3L) µm (1 + 3L) µm	KPA-1.03
4	Micrometers for internal measurement: Rigid inside micrometer gauges Folding inside micrometer gauges Micrometer depth gauges Inside micrometers	(14 – 500) mm	 (1 + 3L) µm (1 + 3L) µm (1.1 + 2L) µm (1.1 + 2L) µm	KPA-1.04
5	Deviation meters: Dial gauges Pupitasts Somcators Internal gauges	(0 – 100) mm	 0.88 µm 1.2 µm 1.2 µm 1.2 µm	KPA-1.05
6	Limit gauges for external measurement: Micrometer calliper gauges Plain rings Threaded rings	(1 – 500) mm	 (1 + 3L) µm (1.2 + 3.6L) µm (2.1 + 7.4L) µm	KPA-1.06

Accredited entity according to ČSN EN ISO/IEC 17025:2005:

František Knížek
Antonína Dvořáka 609, 533 41 Lázně Bohdaneč

Ordinal number [1]	Measured quantity	Measured quantity range	Best measuring ability [±] [2]	Method identification
7	Limit gauges for internal measurement: Plug gauges Thread gauges Feeler gauges Measuring wires Gauges for radius Gauges for threads Gauges for paint thickness	(0.05 – 500) mm	 (0.75 + 5.3L) µm (2.8 + 2.8L) µm 3.6 µm 0.54 µm 4.0 µm 4.0 µm 1.4 µm	KPA-1.07
8*	Rules: Steel rules Steel tape measures	(0 – 10,000) mm	 (4.7 + 4.6L) µm (140 + 3.8L) µm	KPA-1.08
9*	Calibration of two coordinate measuring machine	1000 mm	3.2 µm	KPA-1.09
10	Calibration on a coordinate measuring machine	250 mm	4.0 µm	KPA-1.10

Measured instruments or devices:

(In accordance with the above list of measured quantities and the ranges of measurement the following types of instruments or devices can be measured.)

Ordinal number	Measured instrument/device type
1.	Steel parallels
2.	Slide gauges - Slide rules, Depth slide gauges, Height slide gauges
3.	Micrometers for external measurement - Micrometer calliper gauges, Pasameters, Micropasameters
4.	Micrometers for internal measurement: Rigid inside micrometer gauges, Folding inside micrometer gauges, Micrometer depth gauges, Micrometric head
5.	Deviation meters: Digital gauges, Dial gauges, Pupitasts, Somcators, Internal gauges
6.	Limit gauges for external measurement - Micrometer calliper gauges, Plain rings, Threaded rings
7.	Limit gauges for internal measurement - Cylindrical gauges, Thread gauges, Feeler Gauges, Measuring wires, Gauges for radius, Gauges for threads, Gauges for the measurement of paint thickness
8.	Rules: Steel rules, Steel tape measures, Wooden rules
9.	Two-coordinate measuring machines, Measuring microscopes, Profile projectors
10.	Calibration on a coordinate measuring machine, measurement of jigs

Accredited entity according to ČSN EN ISO/IEC 17025:2005:

František Knížek
Antonína Dvořáka 609, 533 41 Lázně Bohdaneč

Field of measured quantity: Plane angle

Calibration: Nominal calibration temperature: (20 ± 1) °C

Ordinal number [1)]	Measured quantity	Measured quantity range	Best measuring ability [±] [2)]	Method identification
11	Rigid angle gauges	0 – 90°		KPA-1.11
	Check squares		32 µm/m	
	Taper gauges		7´´	
	Accuracy of levels		10 µm/m	
	Centre square		32 µm/m	
	Gauges for threads		7´´	
12	Angle gauges	0 – 360°		KPA-1.12
	mechanical		1.8´	
	arc-shape		0.7°	

Measured instruments or devices:

(In accordance with the above list of measured quantities and the ranges of measurement the following types of instruments or devices can be measured.)

Ordinal number	Measured instrument/device type
11.	Rigid angle gauges: Check squares, Taper gauges, Accuracy of levels, Centre square
12.	Angle meters - Mechanical, Optical, Digital, Angle meters with dial gauges, Arc-shape angle meters

Český institut pro akreditaci, o.p.s.

Accredited entity according to ČSN EN ISO/IEC 17025:2005:

František Knížek
Antonína Dvořáka 609, 533 41 Lázně Bohdaneč

Testing laboratory working site:

1. František Knížek – KALEX, kalibrační středisko, Vlčí Habřina 122, Lázně Bohdaneč

Field of measured quantity: Length

Calibration:

Nominal calibration temperature: (20 ± 1) °C
Nominal calibration temperature outside the permanent premises: (20 ± 10) °C

Ordinal number [1)]	Measured quantity	Measured quantity range	Best measuring ability [±] [2)]	Method identification
1.	Steel parallels	(125 – 1000) mm	(0.3 + 2.2L) µm	KPA-1.01
2-7	Reserved			
8.*	Rules: Steel tape measures Tapes	 (0 – 10,000) mm (0 – 100) m	 (140 + 3.8L) µm (0.3 + 0.06L) mm	KPA-1.08[3)]
9-12	Reserved			

[3)] Nominal temperature for the calibration of measuring tapes: (20 ± 5) °C

Measured instruments or devices:

(In accordance with the above list of measured quantities and the ranges of measurement the following types of instruments or devices can be measured.)

Ordinal number	Measured instrument/device type
1.	Steel parallels
2.-7.	Reserved
8.	Rules - Steel rules, Steel tape measures, Wooden rules, Measuring tapes
9.-12.	Reserved

Field of measured quantity: Mass

Calibration:

Nominal calibration temperature: (20 ± 1) °C
Nominal calibration temperature outside the permanent premises: (0 ÷ 40)°C

Ordinal number [1)]	Measured quantity	Measured quantity range	Best measuring ability [±] [2)]	Method identification
13*	Balances with non-automatic function	(0 – 1) kg (>1 – 45) kg (>45 – 6,000) kg (>6,000 – 30,000) kg	$5*10^{-6}$ MV $1.6*10^{-5}$ MV $5*10^{-5}$ MV $1.6*10^{-4}$ MV	KPA-2.01

Accredited entity according to ČSN EN ISO/IEC 17025:2005:

František Knížek
Antonína Dvořáka 609, 533 41 Lázně Bohdaneč

Measured instruments or devices:

(In accordance with the above list of measured quantities and the ranges of measurement the following types of instruments or devices can be measured.)

Ordinal number	Measured instrument/device type
13.	Mechanical, digital, fine, accurate, common scales

Field of measured quantity: Temperature

Calibration:

Nominal calibration temperature: (23 ± 3) °C
Nominal calibration temperature outside the permanent premises: (-10 ÷ 50) °C

Ordinal number [1)]	Measured quantity	Measured quantity range	Best measuring ability [±] [2)]	Method identification
14*	Glass thermometers	(-40 to 200<) °C	0.07 °C	KPA-3.01
		0 °C	0.05 °C	
	Direct indicating thermometers, Temperature measuring chains	(-40 to 200<) °C	0.07 °C	KPA-3.02
		(200 to 400) °C	0.4 °C	
		(>400 to 650) °C	1.3 °C	
		(>650 to 900)°C [5)]	2 °C	
		(>900 to 1 200)°C [5)]	3 °C	
	Contact thermometers	(40 to 100) °C	2 °C	KPA-3.02
		(>100 to 200) °C	3 °C	
		(>200 to 400) °C	4 °C	
		(>400 to 600) °C	5 °C	

[5)] The calibration is carried out only at the customer on his measuring (sampling) sites

Český institut pro akreditaci, o.p.s.

Accredited entity according to ČSN EN ISO/IEC 17025:2005:

František Knížek
Antonína Dvořáka 609, 533 41 Lázně Bohdaneč

Measured instruments or devices:

(In accordance with the above list of measured quantities and the ranges of measurement the following types of instruments or devices can be measured.)

Ordinal number	Measured instrument/device type
14.	Thermometers, Temperature measuring equipment, Temperature measuring chains, Glass thermometers, Temperature controllers, Contact thermometers

Field of measured quantity: Pressure

Calibration:

Nominal calibration temperature: (20 ± 2) °C

Nominal calibration temperature outside the permanent premises: (20 ± 10) °C

Ordinal number [1)]	Measured quantity	Measured quantity range	Best measuring ability [±] [2)]	Method identification
15*	Underpressure/overpressure gaseous medium	(-95 to 350) kPa	0.26 kPa	KPA-4.01
		(>350 to 1000) kPa	0.58 kPa	KPA-4.02
		(>1000 to 3500) kPa	2.1 kPa	
		(>3500 to 6000) kPa	6.9 kPa	
	Overpressure – liquid medium	(0 to 20000) kPa	35 kPa	KPA-4.01
		(>20000 to 50000) kPa	87 kPa	KPA-4.02

Measured instruments or devices:

(In accordance with the above list of measured quantities and the ranges of measurement the following types of instruments or devices can be measured.)

Ordinal number	Measured instrument/device type
15.	Deformation manometers, Digital manometers, Pressure measuring chains, Vacuum meter, Differential manometers

Český institut pro akreditaci, o.p.s.

Accredited entity according to ČSN EN ISO/IEC 17025:2005:

František Knížek
Antonína Dvořáka 609, 533 41 Lázně Bohdaneč

Field of measured quantity: Moment of force

Calibration:

Nominal calibration temperature: (20 ± 10) °C

Ordinal number [1)]	Measured quantity	Measured quantity range	Best measuring ability [±] [2)]	Method identification
16.	Moment of force	(5 – 500) Nm	0.005 MV	KPA-5.01

1) Asterisk at the ordinal number identifies the calibrations performed outside/also outside the laboratory premises.

2) Expressed like uncertainty in accordance with the requirements of the document EA 4/02 at k = 2

Measured instruments or devices:

(In accordance with the above list of measured quantities and the ranges of measurement the following types of instruments or devices can be measured.)

Ordinal number	Measured instrument/device type
16.	Torque wrenches, screwdrivers, Moment of force meters

Explanations: KPA-X.XX Internal Procedure of the Laboratory

Český institut pro akreditaci, o.p.s.