

# KALIBRACIJSKI CERTIFIKAT

## Calibration certificate

NAROČNIK  
Customer 5Labs d.o.o.  
Legen 112, 2380 Slovenj Gradec

LASTNIK  
Owner 5Labs d.o.o.  
Legen 112, 2380 Slovenj Gradec

MERILO  
Object Merilni obroč • Plain ring gauge

IDENTIFIKACIJA  
Identification 411-16 PROIZVAJALEC  
Manufacturer /

TIP  
Type / MERILNI OBSEG  
Meas. range 15,998 mm



**SLOVENSKA  
AKREDITACIJA**  
SIST EN ISO/IEC 17025  
**LK-034**

Slovenska akreditacija je podpisnica večstrankarskih sporazumov o priznavanju akreditacijskih organov z Evropsko akreditacijo (EA - MLA) in Mednarodnim združenjem za akreditacijo laboratorijev (ILAC - MRA). Slovenian Accreditation is signatory to the multilateral agreements on recognition of accreditation bodies with the European Accreditation (EA - MLA) and International Laboratory Accreditation Cooperation (ILAC - MRA).

KRAJ KALIBRACIJE  
Place of calibration Slovenj Gradec

DATUM KALIBRACIJE  
Date of calibration 6. 12. 2022

DATUM PREJEMA  
Date of receipt 6. 12. 2022

OPOMBE  
Notes

ODOBRIL  
Approved by Petra Oprešnik

Dovoljeno je razmnoževanje le celotnega certifikata. Verodostojnost podpisa je mogoče preveriti v elektronski obliki certifikata. Only the reproduction of the complete certificate is allowed. Signature validity can be verified in electronic version of certificate.

## 1. KALIBRACIJSKI POSTOPEK • Calibration procedure

Kalibracija je narejena v skladu z internim postopkom KL-5Labs-9 in obsega določitev pogreška premera gladkega obroča.

Calibration is made in accordance with the internal calibration procedure KL-5Labs-9 and comprises the determination of ring gauge diameter error.

## 2. KALIBRACIJSKI POGOJI • Calibration conditions

Temperatura • Temperature (20 ± 1) °C

## 3. SLEDLJIVOST • Traceability

Oznake certifikatov pri kalibraciji uporabljenih etalonov

Calibration marks of standards used at calibration

1812	411-10		
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Ta kalibracijski certifikat dokumentira sledljivost do (inter) nacionalnih etalonov v skladu z mednarodnim sistemom merskih enot (SI).

This calibration certificate documents the traceability to (inter) national standards, which realize the units of measurement according to the International System of Units (SI).

Kalibracijski certifikati zgoraj navedene opreme uporabljene pri kalibraciji so javno objavljeni na naši spletni strani pod [https://www.5labs.si/index.php/open\\_documents](https://www.5labs.si/index.php/open_documents)  
The calibration certificates of the above mentioned equipment used at calibration are publicly available on our website at [https://www.5labs.si/index.php/open\\_documents](https://www.5labs.si/index.php/open_documents)

## 4. MERILNA NEGOTOVOST • Measuring uncertainty

$$U = 0,7 \mu\text{m} + 0,0000043 \cdot D$$

Merilna negotovost je podana kot standardna negotovost meritve pomnožena s faktorjem  $k = 2$ , ki pri normalni porazdelitvi ustreza verjetnosti 95%. Standardna merilna negotovost je določena v skladu s publikacijo EA-4/02.

The specification indicates the expanded measuring uncertainty resulting from multiplication of standard measuring uncertainty by the factor  $k = 2$ . It was determined in conformity with EA-4/02. The values of the measurement parameter lie within the specified range with a probability of 95%.

## 6. RAZLAGA REZULTATOV • Result explanation

Povp. pogrešek = povprečje petih oz. štirih pogreškov

Average error = the average of five or four errors

Pogrešek = Izmerjena vrednost - Referenčna vrednost

Error = Measured value - Reference value

Podani merilni rezultati in pripadajoča merilna negotovost se nanašajo samo na to kalibrirano merilo. Izmerjene vrednosti veljajo v času meritev in ne zagotavljajo dolgotrajne stabilnosti.

The measurement results and uncertainties quoted refer only to this calibrated gauge. The measurement results are valid at the time of measurement and do not guarantee long-term stability.

**6. MERILNI REZULTATI • Measurement results • Messergebnisse**

Referenčna vrednost • Reference value [mm]	Izmerjena vrednost • Measured value [mm]	Pogrešek • Error [mm]	Povp. pogrešek • Average error [mm]
15,9980	16,0002	0,0022	0,0022
	16,0002	0,0022	
	16,0002	0,0022	
	16,0001	0,0021	