

CALIBRATION CERTIFICATE

Customer

Object Equotip Leeb DL hardness test block

Manufacturer Proceq SA
Ringstrasse 2
8306 Schwerzenbach
Switzerland



Accredited by Swiss Accreditation Service
in accordance with ISO/IEC 17025.
The Swiss Accreditation service SAS is one
of the signatories to the EA Multilateral
Agreement for the recognition of calibration
certificates.

Serial no. **DL03-142-0125**

Certificate no. **DL03-142-0125_2024_04_18_08_35_23**

Number of pages 2

Date of calibration see page 2

Place and date Schwerzenbach,

Special remarks

This calibration certificate documents the traceability to national standards which realize the physical units of measurements (SI). The measurements, the uncertainties with confidence probability and calibration methods are given on the following pages and are part of the certificate.

The reported expanded uncertainty is stated as the standard uncertainty of measurement multiplied by the coverage factor $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%.

The calibration certificate may not be reproduced other than in full except with the permission of the issuing laboratory. Calibration certificates without signature are not valid.

Object Equotip
Leeb DL hardness test block
DL03-142-0125

On basis of DIN EN ISO 16859-3

Type of calibration Indirect - Single level

Calibration equipment
 Display unit E301-008-0495-14/4K
 Impact device IDL50-003-0095-09/3E

Enlarged uncertainty of Calibration machine
 $U_{CM}(k=2) = 9.0 \text{ HLDL}$

Temperature $23 \pm 2 \text{ }^\circ\text{C}$

Thickness of test block 56.0 mm

Mass of test block 2.8 kg

Date of calibration 2024-04-18

Surface A

Hardness value of 10 indentations

No	1	2	3	4	5	6	7	8	9	10
d/mm	6	15	22	25	28	31	33	36	38	39
HLDL	882.7	879.7	880.5	878.4	881.1	880.5	874.9	878.8	875.1	875.2

Coefficient of variation (repeatability) 0.3%

Hardness of test block $878.7 \pm 9.2 \text{ HLDL}$

Enlarged uncertainty (k=2) of hardness test block 9.2 HLDL

Tester R.Lang _____

SAMPLE Certificate

CALIBRATION CERTIFICATE

Customer

Object Piccolo 2

Manufacturer Proceq SA
Ringstrasse 2
8603 Schwerzenbach
Switzerland

Serial no. **EP03-010-0021**

Certificate no. **EP03-010-0021_2025_09_24_13_24_56**

Number of pages 2

Date of calibration see page 2

Place and date Schwerzenbach,

Special remarks



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Object

**Piccolo 2
EP03-010-0021**



On basis of

DIN EN ISO 16859-2

Hardness value of 10 indentations

No	1	2	3	4	5	6	7	8	9	10
d/mm	6	15	22	25	28	31	33	36	38	39
HLD	776.7	777.8	775.8	774.5	774.2	772.8	772.0	771.9	772.1	771.0

Type of calibration

Indirect - Single level

Calibration equipment

Reference test block

HD03-052-0068 / 776 HLD

Coefficient of variation (repeatability)

0.3%

Enlarged uncertainty of

Reference test block

$U_{RM}(k=2) = 7.5 \text{ HLD}$

Enlarged uncertainty (k=2)

7.7 HLD

Temperature

$23 \pm 2 \text{ }^\circ\text{C}$

Measurement result on reference test block 773.9 HLD

Date of calibration

2025-09-24

Information:

Calibration shall be done within 12 months as specified in above mentioned standards.

Tester B.Reischmann _____

SAMPLE Certificate

CALIBRATION CERTIFICATE

Customer

Object Equotip 550 Portable Rockwell (50N)

Manufacturer /
Calibration
Laboratory Proceq SA
Ringstrasse 2
8603 Schwerzenbach
Switzerland



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Serial no. **ES50-009-0142**

Certificate no. **ES50-009-0142_2026_05_12_08_24_59**

Number of pages 2

Date of calibration see page 2

Place and date Schwerzenbach,

Special remarks

This calibration certificate documents the traceability to national standards which realize the physical units of measurements (SI). The measurements, the uncertainties with confidence probability and calibration methods are given on the following pages and are part of the certificate.

The reported expanded uncertainty is stated as the standard uncertainty of measurement multiplied by the coverage factor $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%.

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CALIBRATION CERTIFICATE

Customer

Object Equotip Leeb D hardness test block

Manufacturer /
Calibration
Laboratory Proceq SA
Ringstrasse 2
8603 Schwerzenbach
Switzerland



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Serial no. **HD03-155-0138**

Certificate no. **HD03-155-0138_2026_02_26_12_52_54**

Number of pages 2

Date of calibration see page 2

Place and date Schwerzenbach,

Special remarks

This calibration certificate documents the traceability to national standards which realize the physical units of measurements (SI). The measurements, the uncertainties with confidence probability and calibration methods are given on the following pages and are part of the certificate.

The reported expanded uncertainty is stated as the standard uncertainty of measurement multiplied by the coverage factor $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%.

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Object Equotip
Leeb D hardness test block
HD03-155-0138

On basis of DIN EN ISO 16859-3:2015

Type of calibration Indirect - Single level

Calibration equipment
 Display unit E301-008-0495-14/4K
 Impact device ID51-012-0452-24/2R

Enlarged uncertainty of Calibration machine
 $U_{CM}(k=2) = 7.6 \text{ HLD}$

Temperature $23 \pm 2 \text{ }^\circ\text{C}$

Thickness of test block 56.0 mm

Mass of test block 2.8 kg

Date of calibration 2026-02-26

Surface A

Hardness value of 10 indentations

No	1	2	3	4	5	6	7	8	9	10
d/mm	6	15	22	25	28	31	33	36	38	39
HLD	787.2	785.1	784.0	780.7	784.9	782.4	781.9	778.4	781.2	780.9

Coefficient of variation (repeatability) 0.3%

Hardness of test block $782.7 \pm 7.8 \text{ HLD}$

Enlarged uncertainty (k=2) of hardness test block 7.8 HLD

Surface B

Hardness value of 10 indentations

No	1	2	3	4	5	6	7	8	9	10
d/mm	6	15	22	25	28	31	33	36	38	39
HLD	782.5	784.2	784.2	780.3	780.4	780.5	780.4	781.4	775.9	780.7

Coefficient of variation (repeatability) 0.3%

Hardness of test block $781.0 \pm 7.8 \text{ HLD}$

Enlarged uncertainty (k=2) of hardness test block 7.8 HLD

Tester R.Lang _____

SAMPLE Certificate