

Calibration Audit Pack

Calibration Audit Report — ISO/IEC 17025:2017

Organisation: Demo Manufacturing Ltd

Generated: 2026-05-01 18:00:55 UTC

Generated by: A. Demo (Quality Manager)

Reporting period: 2025-05-01 to 2026-05-01

Rule engine version: 1

Instruments under control: 30 · Certificates on file: 8 · OOT events in period: 2

This pack is generated automatically from the equipment register, calibration records, certificate uploads, OOT dispositions, and append-only audit log of the listed organisation. No manual assembly. The audit log section reflects the database-level immutability constraints (direct UPDATE/DELETE on audit_log rows is denied at the row-level-security layer).

Calibration Audit Report — ISO/IEC 17025:2017

This report supports an ISO/IEC 17025:2017 audit. Section 6.4 (Equipment) requires that equipment used for testing or calibration is fit for purpose, calibrated as required, and that records of calibration are maintained. Section 7.6 (Evaluation of measurement uncertainty) requires that uncertainty is evaluated and reported.

Reporting period: 2025-05-01 to 2026-05-01. Equipment population: 30 instruments under calibration control. Certificates on file: 8. Out-of-tolerance dispositions in period: 2.

Compliance posture

2 out-of-tolerance dispositions recorded in period. Each disposition is detailed in section F with affected-period, affected-products, disposition, justification, and recalibration schedule.

Coverage

- Section A: Equipment register
- Section B: Per-instrument detail (calibration history + OOT history)
- Section C: Certificate references (filename, SHA-256, signed download URL)
- Section D: Out-of-tolerance disposition records
- Section E: Audit-log excerpt (last 90 days OR last 100 entries, whichever smaller)
- Section F: Method statement + traceability + uncertainty methodology
- Section G: Assessor sign-off page

A. Equipment register (30 instruments)

Serial	Type	Location	Last cal	Next due	In tol	Cert
SN-10000	micrometer	Workshop A	2026-01-01	2027-01-01	Yes	
SN-10007	caliper	Workshop B	2026-02-02	2027-02-02	Yes	
SN-10014	pressure_gauge	Lab — Main	2026-03-03	2027-03-03	Yes	
SN-10021	thermometer	Lab — Clean Room	2026-04-04	2027-04-04	Yes	
SN-10028	weigh_scale	QA Office	2026-01-05	2027-01-05	Yes	
SN-10035	multimeter	Inspection Bay 1	2026-02-06	2027-02-06	Yes	
SN-10042	torque_wrench	Inspection Bay 2	2026-03-07	2027-03-07	Yes	
SN-10049	gauge_block	Goods-In	2026-04-08	2027-04-08	Yes	
SN-10056	optical_comparator	Production Floor	2026-01-09	2027-01-09	Yes	—
SN-10063	flowmeter	Reference Lab	2026-02-10	2027-02-10	Yes	—
SN-10070	micrometer	Workshop A	2026-03-11	2027-03-11	Yes	—
SN-10077	caliper	Workshop B	2026-04-12	2027-04-12	Yes	—
SN-10084	pressure_gauge	Lab — Main	2026-01-13	2027-01-13	No	—
SN-10091	thermometer	Lab — Clean Room	2026-02-14	2027-02-14	Yes	—
SN-10098	weigh_scale	QA Office	2026-03-15	2027-03-15	Yes	—
SN-10105	multimeter	Inspection Bay 1	2026-04-16	2027-04-16	Yes	—
SN-10112	torque_wrench	Inspection Bay 2	2026-01-17	2027-01-17	Yes	—
SN-10119	gauge_block	Goods-In	2026-02-18	2027-02-18	Yes	—
SN-10126	optical_comparator	Production Floor	2026-03-19	2027-03-19	Yes	—
SN-10133	flowmeter	Reference Lab	2026-04-20	2027-04-20	Yes	—

SN-10140	micrometer	Workshop A	2026-01-21	2027-01-21	Yes	—
SN-10147	caliper	Workshop B	2026-02-22	2027-02-22	Yes	—
SN-10154	pressure_gauge	Lab — Main	2026-03-23	2027-03-23	Yes	—
SN-10161	thermometer	Lab — Clean Room	2026-04-24	2027-04-24	Yes	—
SN-10168	weigh_scale	QA Office	2026-01-25	2027-01-25	Yes	—
SN-10175	multimeter	Inspection Bay 1	2026-02-26	2027-02-26	No	—
SN-10182	torque_wrench	Inspection Bay 2	2026-03-27	2027-03-27	Yes	—
SN-10189	gauge_block	Goods-In	2026-04-01	2027-04-01	Yes	—
SN-10196	optical_comparator	Production Floor	2026-01-02	2027-01-02	Yes	—
SN-10203	flowmeter	Reference Lab	2026-02-03	2027-02-03	Yes	—

B. Instrument detail — SN-10000

Serial	SN-10000
Type	micrometer
Manufacturer	Mitutoyo
Location	Workshop A
Last calibration	2026-01-01
Next due	2027-01-01
Most-recent in-tolerance	Yes
Most-recent uncertainty	± 0.005 mm @ k=2 (95%)
Most-recent certificate	cert_10000.pdf

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-01-01	Calibrate Ltd (Manchester)	Pass	± 0.005 mm @ k=2 (95%)	cert_10000.pdf
2025-01-01	Calibrate Ltd (Manchester)	Pass	± 0.005 mm @ k=2 (95%)	—
2024-01-01	Calibrate Ltd (Manchester)	Pass	± 0.005 mm @ k=2 (95%)	—
2023-01-01	Calibrate Ltd (Manchester)	Pass	± 0.005 mm @ k=2 (95%)	—

B. Instrument detail — SN-10007

Serial	SN-10007
Type	caliper
Manufacturer	Mahr
Location	Workshop B
Last calibration	2026-02-02
Next due	2027-02-02
Most-recent in-tolerance	Yes
Most-recent uncertainty	±0.005 mm @ k=2 (95%)
Most-recent certificate	cert_10007.pdf

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-02-02	Precision Cal Services (Sheffield)	Pass	±0.005 mm @ k=2 (95%)	cert_10007.pdf
2025-02-02	Precision Cal Services (Sheffield)	Pass	±0.005 mm @ k=2 (95%)	—
2024-02-02	Precision Cal Services (Sheffield)	Pass	±0.005 mm @ k=2 (95%)	—
2023-02-02	Precision Cal Services (Sheffield)	Pass	±0.005 mm @ k=2 (95%)	—

B. Instrument detail — SN-10014

Serial	SN-10014
Type	pressure_gauge
Manufacturer	Starrett
Location	Lab — Main
Last calibration	2026-03-03
Next due	2027-03-03
Most-recent in-tolerance	Yes
Most-recent uncertainty	±0.05 bar @ k=2 (95%)
Most-recent certificate	cert_10014.pdf

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-03-03	NorthStar Metrology (Leeds)	Pass	±0.05 bar @ k=2 (95%)	cert_10014.pdf
2025-03-03	NorthStar Metrology (Leeds)	Pass	±0.05 bar @ k=2 (95%)	—
2024-03-03	NorthStar Metrology (Leeds)	Pass	±0.05 bar @ k=2 (95%)	—
2023-03-03	NorthStar Metrology (Leeds)	Pass	±0.05 bar @ k=2 (95%)	—

B. Instrument detail — SN-10021

Serial	SN-10021
Type	thermometer
Manufacturer	Tesa
Location	Lab — Clean Room
Last calibration	2026-04-04
Next due	2027-04-04
Most-recent in-tolerance	Yes
Most-recent uncertainty	± 0.2 °C @ k=2 (95%)
Most-recent certificate	cert_10021.pdf

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-04-04	DEMO-LAB-9981 (Coventry — fictional)	Pass	± 0.2 °C @ k=2 (95%)	cert_10021.pdf
2025-04-04	DEMO-LAB-9981 (Coventry — fictional)	Pass	± 0.2 °C @ k=2 (95%)	—
2024-04-04	DEMO-LAB-9981 (Coventry — fictional)	Pass	± 0.2 °C @ k=2 (95%)	—
2023-04-04	DEMO-LAB-9981 (Coventry — fictional)	Pass	± 0.2 °C @ k=2 (95%)	—

B. Instrument detail — SN-10028

Serial	SN-10028
Type	weigh_scale
Manufacturer	Fluke
Location	QA Office
Last calibration	2026-01-05
Next due	2027-01-05
Most-recent in-tolerance	Yes
Most-recent uncertainty	±0.01 g @ k=2 (95%)
Most-recent certificate	cert_10028.pdf

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-01-05	Calibrate Ltd (Manchester)	Pass	±0.01 g @ k=2 (95%)	cert_10028.pdf
2025-01-05	Calibrate Ltd (Manchester)	Pass	±0.01 g @ k=2 (95%)	—
2024-01-05	Calibrate Ltd (Manchester)	Pass	±0.01 g @ k=2 (95%)	—
2023-01-05	Calibrate Ltd (Manchester)	Pass	±0.01 g @ k=2 (95%)	—

B. Instrument detail — SN-10035

Serial	SN-10035
Type	multimeter
Manufacturer	Mitutoyo
Location	Inspection Bay 1
Last calibration	2026-02-06
Next due	2027-02-06
Most-recent in-tolerance	Yes
Most-recent uncertainty	± 0.005 mm @ k=2 (95%)
Most-recent certificate	cert_10035.pdf

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-02-06	Precision Cal Services (Sheffield)	Pass	± 0.005 mm @ k=2 (95%)	cert_10035.pdf
2025-02-06	Precision Cal Services (Sheffield)	Pass	± 0.005 mm @ k=2 (95%)	—
2024-02-06	Precision Cal Services (Sheffield)	Pass	± 0.005 mm @ k=2 (95%)	—
2023-02-06	Precision Cal Services (Sheffield)	Pass	± 0.005 mm @ k=2 (95%)	—

B. Instrument detail — SN-10042

Serial	SN-10042
Type	torque_wrench
Manufacturer	Mahr
Location	Inspection Bay 2
Last calibration	2026-03-07
Next due	2027-03-07
Most-recent in-tolerance	Yes
Most-recent uncertainty	± 0.005 mm @ k=2 (95%)
Most-recent certificate	cert_10042.pdf

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-03-07	NorthStar Metrology (Leeds)	Pass	± 0.005 mm @ k=2 (95%)	cert_10042.pdf
2025-03-07	NorthStar Metrology (Leeds)	Pass	± 0.005 mm @ k=2 (95%)	—
2024-03-07	NorthStar Metrology (Leeds)	Pass	± 0.005 mm @ k=2 (95%)	—
2023-03-07	NorthStar Metrology (Leeds)	Pass	± 0.005 mm @ k=2 (95%)	—

B. Instrument detail — SN-10049

Serial	SN-10049
Type	gauge_block
Manufacturer	Starrett
Location	Goods-In
Last calibration	2026-04-08
Next due	2027-04-08
Most-recent in-tolerance	Yes
Most-recent uncertainty	±0.005 mm @ k=2 (95%)
Most-recent certificate	cert_10049.pdf

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-04-08	DEMO-LAB-9981 (Coventry — fictional)	Pass	±0.005 mm @ k=2 (95%)	cert_10049.pdf
2025-04-08	DEMO-LAB-9981 (Coventry — fictional)	Pass	±0.005 mm @ k=2 (95%)	—
2024-04-08	DEMO-LAB-9981 (Coventry — fictional)	Pass	±0.005 mm @ k=2 (95%)	—
2023-04-08	DEMO-LAB-9981 (Coventry — fictional)	Pass	±0.005 mm @ k=2 (95%)	—

B. Instrument detail — SN-10056

Serial	SN-10056
Type	optical_comparator
Manufacturer	Tesa
Location	Production Floor
Last calibration	2026-01-09
Next due	2027-01-09
Most-recent in-tolerance	Yes
Most-recent uncertainty	±0.005 mm @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-01-09	Calibrate Ltd (Manchester)	Pass	±0.005 mm @ k=2 (95%)	—
2025-01-09	Calibrate Ltd (Manchester)	Pass	±0.005 mm @ k=2 (95%)	—
2024-01-09	Calibrate Ltd (Manchester)	Pass	±0.005 mm @ k=2 (95%)	—
2023-01-09	Calibrate Ltd (Manchester)	Pass	±0.005 mm @ k=2 (95%)	—

B. Instrument detail — SN-10063

Serial	SN-10063
Type	flowmeter
Manufacturer	Fluke
Location	Reference Lab
Last calibration	2026-02-10
Next due	2027-02-10
Most-recent in-tolerance	Yes
Most-recent uncertainty	±0.005 mm @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-02-10	Precision Cal Services (Sheffield)	Pass	±0.005 mm @ k=2 (95%)	—
2025-02-10	Precision Cal Services (Sheffield)	Pass	±0.005 mm @ k=2 (95%)	—
2024-02-10	Precision Cal Services (Sheffield)	Pass	±0.005 mm @ k=2 (95%)	—
2023-02-10	Precision Cal Services (Sheffield)	Pass	±0.005 mm @ k=2 (95%)	—

B. Instrument detail — SN-10070

Serial	SN-10070
Type	micrometer
Manufacturer	Mitutoyo
Location	Workshop A
Last calibration	2026-03-11
Next due	2027-03-11
Most-recent in-tolerance	Yes
Most-recent uncertainty	± 0.005 mm @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-03-11	NorthStar Metrology (Leeds)	Pass	± 0.005 mm @ k=2 (95%)	—
2025-03-11	NorthStar Metrology (Leeds)	Pass	± 0.005 mm @ k=2 (95%)	—
2024-03-11	NorthStar Metrology (Leeds)	Pass	± 0.005 mm @ k=2 (95%)	—
2023-03-11	NorthStar Metrology (Leeds)	Pass	± 0.005 mm @ k=2 (95%)	—

B. Instrument detail — SN-10077

Serial	SN-10077
Type	caliper
Manufacturer	Mahr
Location	Workshop B
Last calibration	2026-04-12
Next due	2027-04-12
Most-recent in-tolerance	Yes
Most-recent uncertainty	±0.005 mm @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-04-12	DEMO-LAB-9981 (Coventry — fictional)	Pass	±0.005 mm @ k=2 (95%)	—
2025-04-12	DEMO-LAB-9981 (Coventry — fictional)	Pass	±0.005 mm @ k=2 (95%)	—
2024-04-12	DEMO-LAB-9981 (Coventry — fictional)	Pass	±0.005 mm @ k=2 (95%)	—
2023-04-12	DEMO-LAB-9981 (Coventry — fictional)	Pass	±0.005 mm @ k=2 (95%)	—

B. Instrument detail — SN-10084

Serial	SN-10084
Type	pressure_gauge
Manufacturer	Starrett
Location	Lab — Main
Last calibration	2026-01-13
Next due	2027-01-13
Most-recent in-tolerance	No
Most-recent uncertainty	±0.05 bar @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-01-13	Calibrate Ltd (Manchester)	OOT	±0.05 bar @ k=2 (95%)	—
2025-01-13	Calibrate Ltd (Manchester)	Pass	±0.05 bar @ k=2 (95%)	—
2024-01-13	Calibrate Ltd (Manchester)	Pass	±0.05 bar @ k=2 (95%)	—
2023-01-13	Calibrate Ltd (Manchester)	Pass	±0.05 bar @ k=2 (95%)	—

Out-of-tolerance history (1)

2026-01-15 — disposition: QUARANTINE. Affected period 2026-01-01 to 2026-04-15. Re-cal scheduled 2026-04-22.

Justification: Drift exceeds manufacturer tolerance. Cannot rule out impact on product conformance during the affected period; quarantine all affected batches pending re-test sample.

B. Instrument detail — SN-10091

Serial	SN-10091
Type	thermometer
Manufacturer	Tesa
Location	Lab — Clean Room
Last calibration	2026-02-14
Next due	2027-02-14
Most-recent in-tolerance	Yes
Most-recent uncertainty	± 0.2 °C @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-02-14	Precision Cal Services (Sheffield)	Pass	± 0.2 °C @ k=2 (95%)	—
2025-02-14	Precision Cal Services (Sheffield)	Pass	± 0.2 °C @ k=2 (95%)	—
2024-02-14	Precision Cal Services (Sheffield)	Pass	± 0.2 °C @ k=2 (95%)	—
2023-02-14	Precision Cal Services (Sheffield)	Pass	± 0.2 °C @ k=2 (95%)	—

B. Instrument detail — SN-10098

Serial	SN-10098
Type	weigh_scale
Manufacturer	Fluke
Location	QA Office
Last calibration	2026-03-15
Next due	2027-03-15
Most-recent in-tolerance	Yes
Most-recent uncertainty	±0.01 g @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-03-15	NorthStar Metrology (Leeds)	Pass	±0.01 g @ k=2 (95%)	—
2025-03-15	NorthStar Metrology (Leeds)	Pass	±0.01 g @ k=2 (95%)	—
2024-03-15	NorthStar Metrology (Leeds)	Pass	±0.01 g @ k=2 (95%)	—
2023-03-15	NorthStar Metrology (Leeds)	Pass	±0.01 g @ k=2 (95%)	—

B. Instrument detail — SN-10105

Serial	SN-10105
Type	multimeter
Manufacturer	Mitutoyo
Location	Inspection Bay 1
Last calibration	2026-04-16
Next due	2027-04-16
Most-recent in-tolerance	Yes
Most-recent uncertainty	± 0.005 mm @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-04-16	DEMO-LAB-9981 (Coventry — fictional)	Pass	± 0.005 mm @ k=2 (95%)	—
2025-04-16	DEMO-LAB-9981 (Coventry — fictional)	Pass	± 0.005 mm @ k=2 (95%)	—
2024-04-16	DEMO-LAB-9981 (Coventry — fictional)	Pass	± 0.005 mm @ k=2 (95%)	—
2023-04-16	DEMO-LAB-9981 (Coventry — fictional)	Pass	± 0.005 mm @ k=2 (95%)	—

B. Instrument detail — SN-10112

Serial	SN-10112
Type	torque_wrench
Manufacturer	Mahr
Location	Inspection Bay 2
Last calibration	2026-01-17
Next due	2027-01-17
Most-recent in-tolerance	Yes
Most-recent uncertainty	±0.005 mm @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-01-17	Calibrate Ltd (Manchester)	Pass	±0.005 mm @ k=2 (95%)	—
2025-01-17	Calibrate Ltd (Manchester)	Pass	±0.005 mm @ k=2 (95%)	—
2024-01-17	Calibrate Ltd (Manchester)	Pass	±0.005 mm @ k=2 (95%)	—
2023-01-17	Calibrate Ltd (Manchester)	Pass	±0.005 mm @ k=2 (95%)	—

B. Instrument detail — SN-10119

Serial	SN-10119
Type	gauge_block
Manufacturer	Starrett
Location	Goods-In
Last calibration	2026-02-18
Next due	2027-02-18
Most-recent in-tolerance	Yes
Most-recent uncertainty	±0.005 mm @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-02-18	Precision Cal Services (Sheffield)	Pass	±0.005 mm @ k=2 (95%)	—
2025-02-18	Precision Cal Services (Sheffield)	Pass	±0.005 mm @ k=2 (95%)	—
2024-02-18	Precision Cal Services (Sheffield)	Pass	±0.005 mm @ k=2 (95%)	—
2023-02-18	Precision Cal Services (Sheffield)	Pass	±0.005 mm @ k=2 (95%)	—

B. Instrument detail — SN-10126

Serial	SN-10126
Type	optical_comparator
Manufacturer	Tesa
Location	Production Floor
Last calibration	2026-03-19
Next due	2027-03-19
Most-recent in-tolerance	Yes
Most-recent uncertainty	±0.005 mm @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-03-19	NorthStar Metrology (Leeds)	Pass	±0.005 mm @ k=2 (95%)	—
2025-03-19	NorthStar Metrology (Leeds)	Pass	±0.005 mm @ k=2 (95%)	—
2024-03-19	NorthStar Metrology (Leeds)	Pass	±0.005 mm @ k=2 (95%)	—
2023-03-19	NorthStar Metrology (Leeds)	Pass	±0.005 mm @ k=2 (95%)	—

B. Instrument detail — SN-10133

Serial	SN-10133
Type	flowmeter
Manufacturer	Fluke
Location	Reference Lab
Last calibration	2026-04-20
Next due	2027-04-20
Most-recent in-tolerance	Yes
Most-recent uncertainty	±0.005 mm @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-04-20	DEMO-LAB-9981 (Coventry — fictional)	Pass	±0.005 mm @ k=2 (95%)	—
2025-04-20	DEMO-LAB-9981 (Coventry — fictional)	Pass	±0.005 mm @ k=2 (95%)	—
2024-04-20	DEMO-LAB-9981 (Coventry — fictional)	Pass	±0.005 mm @ k=2 (95%)	—
2023-04-20	DEMO-LAB-9981 (Coventry — fictional)	Pass	±0.005 mm @ k=2 (95%)	—

B. Instrument detail — SN-10140

Serial	SN-10140
Type	micrometer
Manufacturer	Mitutoyo
Location	Workshop A
Last calibration	2026-01-21
Next due	2027-01-21
Most-recent in-tolerance	Yes
Most-recent uncertainty	±0.005 mm @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-01-21	Calibrate Ltd (Manchester)	Pass	±0.005 mm @ k=2 (95%)	—
2025-01-21	Calibrate Ltd (Manchester)	Pass	±0.005 mm @ k=2 (95%)	—
2024-01-21	Calibrate Ltd (Manchester)	Pass	±0.005 mm @ k=2 (95%)	—
2023-01-21	Calibrate Ltd (Manchester)	Pass	±0.005 mm @ k=2 (95%)	—

B. Instrument detail — SN-10147

Serial	SN-10147
Type	caliper
Manufacturer	Mahr
Location	Workshop B
Last calibration	2026-02-22
Next due	2027-02-22
Most-recent in-tolerance	Yes
Most-recent uncertainty	±0.005 mm @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-02-22	Precision Cal Services (Sheffield)	Pass	±0.005 mm @ k=2 (95%)	—
2025-02-22	Precision Cal Services (Sheffield)	Pass	±0.005 mm @ k=2 (95%)	—
2024-02-22	Precision Cal Services (Sheffield)	Pass	±0.005 mm @ k=2 (95%)	—
2023-02-22	Precision Cal Services (Sheffield)	Pass	±0.005 mm @ k=2 (95%)	—

B. Instrument detail — SN-10154

Serial	SN-10154
Type	pressure_gauge
Manufacturer	Starrett
Location	Lab — Main
Last calibration	2026-03-23
Next due	2027-03-23
Most-recent in-tolerance	Yes
Most-recent uncertainty	±0.05 bar @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-03-23	NorthStar Metrology (Leeds)	Pass	±0.05 bar @ k=2 (95%)	—
2025-03-23	NorthStar Metrology (Leeds)	Pass	±0.05 bar @ k=2 (95%)	—
2024-03-23	NorthStar Metrology (Leeds)	Pass	±0.05 bar @ k=2 (95%)	—
2023-03-23	NorthStar Metrology (Leeds)	Pass	±0.05 bar @ k=2 (95%)	—

B. Instrument detail — SN-10161

Serial	SN-10161
Type	thermometer
Manufacturer	Tesa
Location	Lab — Clean Room
Last calibration	2026-04-24
Next due	2027-04-24
Most-recent in-tolerance	Yes
Most-recent uncertainty	± 0.2 °C @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-04-24	DEMO-LAB-9981 (Coventry — fictional)	Pass	± 0.2 °C @ k=2 (95%)	—
2025-04-24	DEMO-LAB-9981 (Coventry — fictional)	Pass	± 0.2 °C @ k=2 (95%)	—
2024-04-24	DEMO-LAB-9981 (Coventry — fictional)	Pass	± 0.2 °C @ k=2 (95%)	—
2023-04-24	DEMO-LAB-9981 (Coventry — fictional)	Pass	± 0.2 °C @ k=2 (95%)	—

B. Instrument detail — SN-10168

Serial	SN-10168
Type	weigh_scale
Manufacturer	Fluke
Location	QA Office
Last calibration	2026-01-25
Next due	2027-01-25
Most-recent in-tolerance	Yes
Most-recent uncertainty	±0.01 g @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-01-25	Calibrate Ltd (Manchester)	Pass	±0.01 g @ k=2 (95%)	—
2025-01-25	Calibrate Ltd (Manchester)	Pass	±0.01 g @ k=2 (95%)	—
2024-01-25	Calibrate Ltd (Manchester)	Pass	±0.01 g @ k=2 (95%)	—
2023-01-25	Calibrate Ltd (Manchester)	Pass	±0.01 g @ k=2 (95%)	—

B. Instrument detail — SN-10175

Serial	SN-10175
Type	multimeter
Manufacturer	Mitutoyo
Location	Inspection Bay 1
Last calibration	2026-02-26
Next due	2027-02-26
Most-recent in-tolerance	No
Most-recent uncertainty	± 0.005 mm @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-02-26	Precision Cal Services (Sheffield)	OOT	± 0.005 mm @ k=2 (95%)	—
2025-02-26	Precision Cal Services (Sheffield)	Pass	± 0.005 mm @ k=2 (95%)	—
2024-02-26	Precision Cal Services (Sheffield)	Pass	± 0.005 mm @ k=2 (95%)	—
2023-02-26	Precision Cal Services (Sheffield)	Pass	± 0.005 mm @ k=2 (95%)	—

Out-of-tolerance history (1)

2026-02-15 — disposition: QUARANTINE. Affected period 2026-01-01 to 2026-04-15. Re-cal scheduled 2026-04-22.

Justification: Drift exceeds manufacturer tolerance. Cannot rule out impact on product conformance during the affected period; quarantine all affected batches pending re-test sample.

B. Instrument detail — SN-10182

Serial	SN-10182
Type	torque_wrench
Manufacturer	Mahr
Location	Inspection Bay 2
Last calibration	2026-03-27
Next due	2027-03-27
Most-recent in-tolerance	Yes
Most-recent uncertainty	±0.005 mm @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-03-27	NorthStar Metrology (Leeds)	Pass	±0.005 mm @ k=2 (95%)	—
2025-03-27	NorthStar Metrology (Leeds)	Pass	±0.005 mm @ k=2 (95%)	—
2024-03-27	NorthStar Metrology (Leeds)	Pass	±0.005 mm @ k=2 (95%)	—
2023-03-27	NorthStar Metrology (Leeds)	Pass	±0.005 mm @ k=2 (95%)	—

B. Instrument detail — SN-10189

Serial	SN-10189
Type	gauge_block
Manufacturer	Starrett
Location	Goods-In
Last calibration	2026-04-01
Next due	2027-04-01
Most-recent in-tolerance	Yes
Most-recent uncertainty	±0.005 mm @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-04-01	DEMO-LAB-9981 (Coventry — fictional)	Pass	±0.005 mm @ k=2 (95%)	—
2025-04-01	DEMO-LAB-9981 (Coventry — fictional)	Pass	±0.005 mm @ k=2 (95%)	—
2024-04-01	DEMO-LAB-9981 (Coventry — fictional)	Pass	±0.005 mm @ k=2 (95%)	—
2023-04-01	DEMO-LAB-9981 (Coventry — fictional)	Pass	±0.005 mm @ k=2 (95%)	—

B. Instrument detail — SN-10196

Serial	SN-10196
Type	optical_comparator
Manufacturer	Tesa
Location	Production Floor
Last calibration	2026-01-02
Next due	2027-01-02
Most-recent in-tolerance	Yes
Most-recent uncertainty	±0.005 mm @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-01-02	Calibrate Ltd (Manchester)	Pass	±0.005 mm @ k=2 (95%)	—
2025-01-02	Calibrate Ltd (Manchester)	Pass	±0.005 mm @ k=2 (95%)	—
2024-01-02	Calibrate Ltd (Manchester)	Pass	±0.005 mm @ k=2 (95%)	—
2023-01-02	Calibrate Ltd (Manchester)	Pass	±0.005 mm @ k=2 (95%)	—

B. Instrument detail — SN-10203

Serial	SN-10203
Type	flowmeter
Manufacturer	Fluke
Location	Reference Lab
Last calibration	2026-02-03
Next due	2027-02-03
Most-recent in-tolerance	Yes
Most-recent uncertainty	±0.005 mm @ k=2 (95%)
Most-recent certificate	—

Calibration history (last 4 cycles)

Date	Provider	Result	Uncertainty (k=2)	Certificate
2026-02-03	Precision Cal Services (Sheffield)	Pass	±0.005 mm @ k=2 (95%)	—
2025-02-03	Precision Cal Services (Sheffield)	Pass	±0.005 mm @ k=2 (95%)	—
2024-02-03	Precision Cal Services (Sheffield)	Pass	±0.005 mm @ k=2 (95%)	—
2023-02-03	Precision Cal Services (Sheffield)	Pass	±0.005 mm @ k=2 (95%)	—

C. Certificate references (8)

Certificate links below are valid until 2026-05-08 18:00:55 UTC (~7 days from generation). Regenerate this report at audit time for active links. Certificates are retained at the workspace path for the full retention period (active subscription + 30-day grace; audit-log retained 7 years per ISO 9001 / 17025 / UK GDPR exception).

Filename	Linked instrument	Cal date	Uploaded	SHA-256 (first 16)	Link
cert_10000.pdf	SN-10000	2026-01-01	2026-01-01	aaaaaaaa00000000...	Open
cert_10007.pdf	SN-10007	2026-02-02	2026-02-02	aaaaaaaa00000000...	Open
cert_10014.pdf	SN-10014	2026-03-03	2026-03-03	aaaaaaaa00000000...	Open
cert_10021.pdf	SN-10021	2026-04-04	2026-04-04	aaaaaaaa00000000...	Open
cert_10028.pdf	SN-10028	2026-01-05	2026-01-05	aaaaaaaa00000000...	Open
cert_10035.pdf	SN-10035	2026-02-06	2026-02-06	aaaaaaaa00000000...	Open
cert_10042.pdf	SN-10042	2026-03-07	2026-03-07	aaaaaaaa00000000...	Open
cert_10049.pdf	SN-10049	2026-04-08	2026-04-08	aaaaaaaa00000000...	Open

D.1 Out-of-tolerance disposition record

Instrument serial	SN-10084
Instrument type	pressure_gauge
Location	Lab — Main
Affected period start	2026-01-01
Affected period end	2026-04-15
Disposition	QUARANTINE
Dispositioned by	qa.lead@demo-mfg.example
Dispositioned at	2026-01-15 09:30:00 UTC
Recalibration scheduled	2026-04-22

Affected products / measurements

142 batches across 6 SKUs (full list in the in-product affected-products review). Operations affected: incoming-material inspection (3 SKUs), final-test sign-off (3 SKUs).

Disposition justification

Drift exceeds manufacturer tolerance. Cannot rule out impact on product conformance during the affected period; quarantine extends to all 142 batches pending re-test sample.

D.2 Out-of-tolerance disposition record

Instrument serial	SN-10175
Instrument type	multimeter
Location	Inspection Bay 1
Affected period start	2026-01-01
Affected period end	2026-04-15
Disposition	QUARANTINE
Dispositioned by	qa.lead@demo-mfg.example
Dispositioned at	2026-02-15 09:30:00 UTC
Recalibration scheduled	2026-04-22

Affected products / measurements

142 batches across 6 SKUs (full list in the in-product affected-products review). Operations affected: incoming-material inspection (3 SKUs), final-test sign-off (3 SKUs).

Disposition justification

Drift exceeds manufacturer tolerance. Cannot rule out impact on product conformance during the affected period; quarantine extends to all 142 batches pending re-test sample.

E. Audit-log excerpt (100 entries)

Append-only log scoped to this organisation. UPDATE/DELETE on audit_log rows is denied at the database layer (BEFORE UPDATE/DELETE trigger raises EXCEPTION; the only allowed insert path is the SECURITY DEFINER `private.audit_log_insert` wrapper). Excerpt covers the smaller of (a) the last 90 days or (b) the last 100 entries.

When (UTC)	Action	Actor	Target
2026-02-01 01:00:00	instrument.created	admin@demo-mfg.example	instruments:inst-10000
2026-03-02 02:07:00	instrument.updated	qa.lead@demo-mfg.example	instruments:inst-10049
2026-04-03 03:14:00	calibration.recorded	workshop.supervisor@demo-mfg.example	instruments:inst-10098
2026-02-04 04:21:00	certificate.uploaded	admin@demo-mfg.example	instruments:inst-10147
2026-03-05 05:28:00	oot.dispositioned	qa.lead@demo-mfg.example	instruments:inst-10196
2026-04-06 06:35:00	audit_report.generated	workshop.supervisor@demo-mfg.example	instruments:inst-10035
2026-02-07 07:42:00	rule_engine.published	admin@demo-mfg.example	instruments:inst-10084
2026-03-08 08:49:00	org_member.invited	qa.lead@demo-mfg.example	instruments:inst-10133
2026-04-09 09:56:00	instrument.created	workshop.supervisor@demo-mfg.example	instruments:inst-10182
2026-02-10 10:03:00	instrument.updated	admin@demo-mfg.example	instruments:inst-10021
2026-03-11 11:10:00	calibration.recorded	qa.lead@demo-mfg.example	instruments:inst-10070
2026-04-12 12:17:00	certificate.uploaded	workshop.supervisor@demo-mfg.example	instruments:inst-10119
2026-02-13 13:24:00	oot.dispositioned	admin@demo-mfg.example	instruments:inst-10168
2026-03-14 14:31:00	audit_report.generated	qa.lead@demo-mfg.example	instruments:inst-10007

2026-04-15 15:38:00	rule_engine.published	workshop.supervisor@demo-mfg.example	instruments:inst-10056
2026-02-16 16:45:00	org_member.invited	admin@demo-mfg.example	instruments:inst-10105
2026-03-17 17:52:00	instrument.created	qa.lead@demo-mfg.example	instruments:inst-10154
2026-04-18 18:59:00	instrument.updated	workshop.supervisor@demo-mfg.example	instruments:inst-10203
2026-02-19 19:06:00	calibration.recorded	admin@demo-mfg.example	instruments:inst-10042
2026-03-20 20:13:00	certificate.uploaded	qa.lead@demo-mfg.example	instruments:inst-10091
2026-04-21 21:20:00	oot.dispositioned	workshop.supervisor@demo-mfg.example	instruments:inst-10140
2026-02-22 22:27:00	audit_report.generated	admin@demo-mfg.example	instruments:inst-10189
2026-03-23 23:34:00	rule_engine.published	qa.lead@demo-mfg.example	instruments:inst-10028
2026-04-24 01:41:00	org_member.invited	workshop.supervisor@demo-mfg.example	instruments:inst-10077
2026-02-25 02:48:00	instrument.created	admin@demo-mfg.example	instruments:inst-10126
2026-03-26 03:55:00	instrument.updated	qa.lead@demo-mfg.example	instruments:inst-10175
2026-04-27 04:02:00	calibration.recorded	workshop.supervisor@demo-mfg.example	instruments:inst-10014
2026-02-01 05:09:00	certificate.uploaded	admin@demo-mfg.example	instruments:inst-10063
2026-03-02 06:16:00	oot.dispositioned	qa.lead@demo-mfg.example	instruments:inst-10112
2026-04-03 07:23:00	audit_report.generated	workshop.supervisor@demo-mfg.example	instruments:inst-10161
2026-02-04 08:30:00	rule_engine.published	admin@demo-mfg.example	instruments:inst-10000

2026-03-05 09:37:00	org_member.invited	qa.lead@demo-mfg.example	instruments:inst-10049
2026-04-06 10:44:00	instrument.created	workshop.supervisor@demo-mfg.example	instruments:inst-10098
2026-02-07 11:51:00	instrument.updated	admin@demo-mfg.example	instruments:inst-10147
2026-03-08 12:58:00	calibration.recorded	qa.lead@demo-mfg.example	instruments:inst-10196
2026-04-09 13:05:00	certificate.uploaded	workshop.supervisor@demo-mfg.example	instruments:inst-10035
2026-02-10 14:12:00	oot.dispositioned	admin@demo-mfg.example	instruments:inst-10084
2026-03-11 15:19:00	audit_report.generated	qa.lead@demo-mfg.example	instruments:inst-10133
2026-04-12 16:26:00	rule_engine.published	workshop.supervisor@demo-mfg.example	instruments:inst-10182
2026-02-13 17:33:00	org_member.invited	admin@demo-mfg.example	instruments:inst-10021
2026-03-14 18:40:00	instrument.created	qa.lead@demo-mfg.example	instruments:inst-10070
2026-04-15 19:47:00	instrument.updated	workshop.supervisor@demo-mfg.example	instruments:inst-10119
2026-02-16 20:54:00	calibration.recorded	admin@demo-mfg.example	instruments:inst-10168
2026-03-17 21:01:00	certificate.uploaded	qa.lead@demo-mfg.example	instruments:inst-10007
2026-04-18 22:08:00	oot.dispositioned	workshop.supervisor@demo-mfg.example	instruments:inst-10056
2026-02-19 23:15:00	audit_report.generated	admin@demo-mfg.example	instruments:inst-10105
2026-03-20 01:22:00	rule_engine.published	qa.lead@demo-mfg.example	instruments:inst-10154
2026-04-21 02:29:00	org_member.invited	workshop.supervisor@demo-mfg.example	instruments:inst-10203

2026-02-22 03:36:00	instrument.created	admin@demo-mfg.example	instruments:inst-10042
2026-03-23 04:43:00	instrument.updated	qa.lead@demo-mfg.example	instruments:inst-10091
2026-04-24 05:50:00	calibration.recorded	workshop.supervisor@demo-mfg.example	instruments:inst-10140
2026-02-25 06:57:00	certificate.uploaded	admin@demo-mfg.example	instruments:inst-10189
2026-03-26 07:04:00	oot.dispositioned	qa.lead@demo-mfg.example	instruments:inst-10028
2026-04-27 08:11:00	audit_report.generated	workshop.supervisor@demo-mfg.example	instruments:inst-10077
2026-02-01 09:18:00	rule_engine.published	admin@demo-mfg.example	instruments:inst-10126
2026-03-02 10:25:00	org_member.invited	qa.lead@demo-mfg.example	instruments:inst-10175
2026-04-03 11:32:00	instrument.created	workshop.supervisor@demo-mfg.example	instruments:inst-10014
2026-02-04 12:39:00	instrument.updated	admin@demo-mfg.example	instruments:inst-10063
2026-03-05 13:46:00	calibration.recorded	qa.lead@demo-mfg.example	instruments:inst-10112
2026-04-06 14:53:00	certificate.uploaded	workshop.supervisor@demo-mfg.example	instruments:inst-10161
2026-02-07 15:00:00	oot.dispositioned	admin@demo-mfg.example	instruments:inst-10000
2026-03-08 16:07:00	audit_report.generated	qa.lead@demo-mfg.example	instruments:inst-10049
2026-04-09 17:14:00	rule_engine.published	workshop.supervisor@demo-mfg.example	instruments:inst-10098
2026-02-10 18:21:00	org_member.invited	admin@demo-mfg.example	instruments:inst-10147
2026-03-11 19:28:00	instrument.created	qa.lead@demo-mfg.example	instruments:inst-10196

2026-04-12 20:35:00	instrument.updated	workshop.supervisor@demo-mfg.example	instruments:inst-10035
2026-02-13 21:42:00	calibration.recorded	admin@demo-mfg.example	instruments:inst-10084
2026-03-14 22:49:00	certificate.uploaded	qa.lead@demo-mfg.example	instruments:inst-10133
2026-04-15 23:56:00	oot.dispositioned	workshop.supervisor@demo-mfg.example	instruments:inst-10182
2026-02-16 01:03:00	audit_report.generated	admin@demo-mfg.example	instruments:inst-10021
2026-03-17 02:10:00	rule_engine.published	qa.lead@demo-mfg.example	instruments:inst-10070
2026-04-18 03:17:00	org_member.invited	workshop.supervisor@demo-mfg.example	instruments:inst-10119
2026-02-19 04:24:00	instrument.created	admin@demo-mfg.example	instruments:inst-10168
2026-03-20 05:31:00	instrument.updated	qa.lead@demo-mfg.example	instruments:inst-10007
2026-04-21 06:38:00	calibration.recorded	workshop.supervisor@demo-mfg.example	instruments:inst-10056
2026-02-22 07:45:00	certificate.uploaded	admin@demo-mfg.example	instruments:inst-10105
2026-03-23 08:52:00	oot.dispositioned	qa.lead@demo-mfg.example	instruments:inst-10154
2026-04-24 09:59:00	audit_report.generated	workshop.supervisor@demo-mfg.example	instruments:inst-10203
2026-02-25 10:06:00	rule_engine.published	admin@demo-mfg.example	instruments:inst-10042
2026-03-26 11:13:00	org_member.invited	qa.lead@demo-mfg.example	instruments:inst-10091
2026-04-27 12:20:00	instrument.created	workshop.supervisor@demo-mfg.example	instruments:inst-10140
2026-02-01 13:27:00	instrument.updated	admin@demo-mfg.example	instruments:inst-10189

2026-03-02 14:34:00	calibration.recorded	qa.lead@demo-mfg.example	instruments:inst-10028
2026-04-03 15:41:00	certificate.uploaded	workshop.supervisor@demo-mfg.example	instruments:inst-10077
2026-02-04 16:48:00	oot.dispositioned	admin@demo-mfg.example	instruments:inst-10126
2026-03-05 17:55:00	audit_report.generated	qa.lead@demo-mfg.example	instruments:inst-10175
2026-04-06 18:02:00	rule_engine.published	workshop.supervisor@demo-mfg.example	instruments:inst-10014
2026-02-07 19:09:00	org_member.invited	admin@demo-mfg.example	instruments:inst-10063
2026-03-08 20:16:00	instrument.created	qa.lead@demo-mfg.example	instruments:inst-10112
2026-04-09 21:23:00	instrument.updated	workshop.supervisor@demo-mfg.example	instruments:inst-10161
2026-02-10 22:30:00	calibration.recorded	admin@demo-mfg.example	instruments:inst-10000
2026-03-11 23:37:00	certificate.uploaded	qa.lead@demo-mfg.example	instruments:inst-10049
2026-04-12 01:44:00	oot.dispositioned	workshop.supervisor@demo-mfg.example	instruments:inst-10098
2026-02-13 02:51:00	audit_report.generated	admin@demo-mfg.example	instruments:inst-10147
2026-03-14 03:58:00	rule_engine.published	qa.lead@demo-mfg.example	instruments:inst-10196
2026-04-15 04:05:00	org_member.invited	workshop.supervisor@demo-mfg.example	instruments:inst-10035
2026-02-16 05:12:00	instrument.created	admin@demo-mfg.example	instruments:inst-10084
2026-03-17 06:19:00	instrument.updated	qa.lead@demo-mfg.example	instruments:inst-10133
2026-04-18 07:26:00	calibration.recorded	workshop.supervisor@demo-mfg.example	instruments:inst-10182

2026-02-19 08:33:00	certificate.uploaded	admin@demo-mfg.example	instruments:inst-10021
---------------------	----------------------	------------------------	------------------------

F. Method statement + traceability + uncertainty methodology

F.1 Calibration method

Calibrations recorded in this pack are carried out per the manufacturer's specification + ISO/IEC 17025:2017 §7.6 (uncertainty evaluation). Where the manufacturer specifies a tolerance and a calibration interval, both are honoured. Where the in-house tolerance or interval is tighter than the manufacturer's, the in-house value takes precedence and is recorded in the equipment register against the instrument.

F.2 Traceability

Calibration providers are UKAS-accredited where available (UKAS Lab Reference numbers cited on the issued certificates). Where UKAS accreditation is not available for a specific measurand, the laboratory's scope letter is held on file and the alternative basis for traceability is recorded against the calibration entry.

F.3 Uncertainty evaluation

Type B uncertainty contributions are evaluated per ISO/IEC Guide 98-3:2008 (GUM): instrument resolution (rectangular, divisor 3), reference-standard expanded uncertainty (from the provider's certificate), reference-standard drift, repeatability (Type A), and environmental contribution. Combined standard uncertainty $u_c = \sqrt{\sum u_i^2}$. Expanded uncertainty $U = k \times u_c$ with coverage factor $k = 2$ (~95% confidence, normal distribution assumption). Reported uncertainties on each certificate are expanded uncertainties at $k=2$.

F.4 Records + retention

Records (instrument register, calibration certificates, OOT dispositions, audit logs, generated reports) are retained for the active subscription + 30-day grace and then permanently deleted, with the audit log retained for 7 years post-cancellation per the UK ISO 9001 / ISO 17025 record-retention obligations and the GDPR retention exception disclosed in the privacy policy.

G. Sign-off

Generated by

Organisation	Demo Manufacturing Ltd
Generated by	A. Demo (Quality Manager)
Email	admin@demo-mfg.example
Generated at	2026-05-01 18:00:55 UTC
Reporting period	2025-05-01 to 2026-05-01
Template	Calibration Audit Report — ISO/IEC 17025:2017
Rule engine version	1

Reviewed by (assessor)

This page is left blank for the auditor or assessor to record their findings + signature.

Reviewer name + role

Signature

Date

Notes from the report originator

Sample pack generated quarterly via ``npm run build:sample-pack``. Synthetic data — no real customer information. Mirrors the structure of a real audit-evidence bundle generated by CalProof from your equipment register, calibration records, certificate uploads, OOT dispositions, and append-only audit log. Generated by the same ``renderAuditReportPdf`` runtime that powers ``/api/reports/audit``.