

COMPLIANCE WORKING RECORD

Unit conversion checker

Fictional sample. Requires tailoring and responsible review.

Document control

Field	Value
Organization	Not recorded
Document type	Unit conversion checker
Document reference	39-unit-conversion-checker
Jurisdiction	United States
Version	1
Status	Conversions require review
Prepared by	Customer prepared
Prepared on	October 5, 2026
Sources reviewed	October 6, 2026
Generated	October 6, 2026

Purpose and boundary

Convert supported physical units and check reported conversions with exact factors, visible formulas and customer-entered tolerances.

Arithmetic checks use the stated unit definitions. They do not authenticate measurements or decide an acceptable tolerance, legal threshold or compliance result.

Document control

Field	Value
Tool identifier	39-unit-conversion-checker
Specification version	1

Field	Value
Dataset method revision	2026-10-06.unit-conversion.1
Engine	validator
Result status	Conversions require review

Result

7 conversions. 4 within tolerance, 1 outside tolerance, 1 calculated without a reported value, and 1 unresolved.

- Conversion method 2026-10-06.unit-conversion.1.

- Convert through the dimension base using exact rational factors and offsets. Compare the unrounded result with the entered value using an absolute tolerance in target units. A blank tolerance means zero. Display at most 12 decimal places, rounding ties away from zero. Exact fractions remain in JSON, CSV and Excel.

- Length and area use the international foot. Mass lb and oz use avoirdupois. US liquid units are explicit. Duration days are exactly 24 elapsed hours.

- Temperature values are absolute temperatures, not differences. A rounded display of zero can represent a nonzero exact fraction.

- The PDF summarizes the first 100 rows. The Excel report and raw JSON or CSV preserve every result row. Original source cells are retained separately.

Measure	Value
Rows	7
Within tolerance	4
Outside tolerance	1
Unchecked or unresolved	2

Unresolved items

- Confirm the intended quantity, unit system, source figures, measurement uncertainty and tolerance before use.

- Row 6. Unrounded absolute error exceeds the entered tolerance. Review the reported value.

- Row 7. Unsupported or ambiguous unit. Use an exact listed symbol, including US for liquid units.

- Row 8. No reported value was supplied. No accuracy check was performed.

Detailed results

This summary shows the first 100 conversion rows. The Excel report preserves every result, exact fraction, formula, entered value and tolerance. Free JSON and CSV result downloads also preserve every result row.

Record	Input	Calculated	Check
Row 2. FICTIONAL-LENGTH	12 in	1 ft	Within tolerance
Row 3. FICTIONAL-MASS	1 lb	0.45359237 kg	Within tolerance
Row 4. FICTIONAL-VOLUME	1 US gal	3.785411784 L	Within tolerance
Row 5. FICTIONAL-TEMPERATURE	0 °C	32 °F	Within tolerance
Row 6. FICTIONAL-ERROR	1 m	100 cm	Outside tolerance
Row 7. FICTIONAL-UNSUPPORTED	1 gal	Unresolved	Unresolved
Row 8. FICTIONAL-CALCULATED	1 ft	0.3048 m	Calculated

Record	Review
Row 2. FICTIONAL-LENGTH	Unrounded absolute error is within the entered tolerance.
Row 3. FICTIONAL-MASS	Unrounded absolute error is within the entered tolerance.
Row 4. FICTIONAL-VOLUME	Unrounded absolute error is within the entered tolerance.
Row 5. FICTIONAL-TEMPERATURE	Unrounded absolute error is within the entered tolerance.
Row 6. FICTIONAL-ERROR	Unrounded absolute error exceeds the entered tolerance. Review the reported value.
Row 7. FICTIONAL-UNSUPPORTED	Unsupported or ambiguous unit. Use an exact listed symbol, including US for liquid units.
Row 8. FICTIONAL-CALCULATED	No reported value was supplied. No accuracy check was performed.

Assumptions

- No additional assumption was recorded.

Limitations

- Arithmetic checks use the stated unit definitions. They do not authenticate measurements or decide an acceptable tolerance, legal threshold or compliance result.

Official sources

Source	Provision	Date	Link
National Institute of Standards and Technology: Handbook 44 (2023), Appendix C	Unit conversion checker. Exact international length, avoirdupois mass, metric and US liquid volume definitions, and absolute temperature equations.	October 6, 2026	https://www.nist.gov/system/files/documents/2023/01/30/appc-23-HB44.pdf
National Institute of Standards and Technology: Guide to the SI, Appendix B.8	Unit conversion checker. Supported quantity dimensions and conversion relationships. Rounded table values are distinguished from exact definitions.	October 6, 2026	https://www.nist.gov/pml/special-publication-811/nist-guide-si-appendix-b-conversion-factors/nist-guide-si-appendix-b8