

Compressed Air Leak Cost Tracker

How-to guide: what the workbook does, how to use it and what every number means.

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Compressed Air Leak Cost Tracker

Log every compressed air leak from a survey, see what each one costs a year, fix them in the order that saves most, and track the savings.

For: Maintenance and energy managers, plant engineers and anyone running a compressed air leak detection and repair program.

Version 1.0.0 · updated 15 October 2026

Quick start

1. On Setup, type your electricity rate, the compressor's specific power, the hours the system is pressurized, its capacity and your leakage target.
2. Replace the example areas and component types with your own.
3. On Leak Register, add one row per tagged leak: tag, date found, area, location, component, the flow your detector reads and its unit, and the repair estimate.
4. When a leak is fixed, type the repair date; move the status date on Setup forward each time you update the log.
5. Open the Dashboard: work down the repair list and watch open leakage against your target.

What is in the workbook

Start Here	Read this first: what the workbook does and how to use it.
Setup	Your rate, compressor, pressurized hours, capacity, targets and the area and component lists.
Leak Register	One row per tagged leak: flow, annual cost, avoidable cost, payback, repair status and repair order.
Dashboard	What open leaks still cost, what repairs have saved, leakage against your target, and what to fix next.
Method	How every number is calculated, with assumptions, limits and sources.
Verify	Self-check: the workbook's formulas recomputed on fixed inputs against an independent reference.

What each number means

Quantity	How it is calculated	Units
Power per cfm of leakage	Specific power / 100 for kW per 100 cfm, or x 0.028316846592 for kW per m ³ /min (1 cfm = 0.028316846592 m ³ /min, exact).	kW per cfm
Annual cost of one cfm	Power per cfm x pressurized hours per year x electricity rate (Setup).	currency/cfm-yr

Quantity	How it is calculated	Units
Flow (cfm)	Leak flow converted exactly: L/min / 28.316846592; L/s x 60 / 28.316846592; m3/min / 0.028316846592.	cfm
Annual energy	Flow (cfm) x power per cfm x pressurized hours.	kWh/yr
Annual cost	Annual energy x electricity rate: the cost attributed to the leak.	currency/yr
Avoidable cost	Annual cost x the share a repair avoids (Setup).	currency/yr
Payback	Repair cost (est.) / avoidable cost x 12. Blank without a repair estimate.	months
Repair due, days open	Found + repair window. Days open: repaired date (or the status date while open) - found.	date, days
Status	Complete when repaired; else Overdue after the due date, Due soon within 7 days of it, otherwise Open (all against the status date).	-
Repair order	Rank of an open leak by avoidable cost, 1 = largest (COUNTIFS of open leaks costing more, ties by tag number).	-
Open leakage	Sum of Flow (cfm) of leaks not Complete / capacity in cfm (capacity converted like the flow).	%
Dashboard totals	SUMIFS/COUNTIFS over the register by Status, area and component. Program payback = all repair cost / all avoidable cost x 12. Pareto helper columns AO:AQ (hidden) hold the unsorted values and ranks.	-

Assumptions, limitations, sources and the self-check (the Verify sheet, which recomputes the workbook's formulas on fixed test inputs) are in the workbook. The last page shows the Dashboard with the example data for Northgate Fabrication, a fictional business.

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Engineering estimates for planning and improvement work. Verify the results against your own process, data and standards before you rely on them.

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Status date

9 Oct 2026

Cost of 1 cfm of leakage

125.40 USD/cfm-yr

Money in USD per year at the Setup rate. 48 leaks logged, 26 repaired.

AVOIDABLE COST STILL OPEN (USD/YR)	SAVED BY REPAIRS (USD/YR)	OPEN LEAKAGE (SHARE OF CAPACITY)	OVERDUE REPAIRS
11,493	10,321	14.3%	16
Fix every open leak to save this	Avoidable cost of repaired leaks	Target 10.0% Above target	Open past the repair window

