

Make vs Buy Analysis

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

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Make vs Buy Analysis

Compare the avoidable cost of making a part with the delivered cost of buying it, for all-make, all-buy or a split, with break-even and capacity.

For: Plant and operations managers, cost and manufacturing engineers, buyers and owners deciding whether to make, buy or split a part.

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Quick start

1. On Setup, type your company, currency, decision horizon and the hours the make resource has available.
2. On Make vs Buy, enter the part, annual demand, your internal share and the hours per unit to make it.
3. List the make costs (per unit, per year or one-off) and mark each Avoidable Yes or No; list the buy costs the same way.
4. Read the plan results, break-even volume and capacity check, compare the scenarios, and score the strategic factors.
5. Open the Dashboard for the decision on one page.

What is in the workbook

Start Here	Read this first: what the workbook does and how to use it.
Setup	Your company, currency, decision horizon and the capacity of the make resource.
Make vs Buy	The part, the cost to make and to buy, your plan, scenarios by internal share and strategic factors.
Dashboard	The make-or-buy decision for the part on one page: costs, break-even, capacity and strategic factors.
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
Per unit at demand	Per unit lines as typed; per year lines / demand; one-off lines / horizon / demand.	currency/unit
Avoidable make cost per unit	Sum of Make lines with Basis Per unit and Avoidable Yes.	currency/unit
Avoidable make fixed cost	Avoidable Per year lines + avoidable One-off lines / decision horizon.	currency/yr

Quantity	How it is calculated	Units
Full absorbed cost per unit	Sum of every Make line per unit at demand, avoidable or not: what a full-cost report shows. For comparison only.	currency/unit
Delivered buy cost and buy fixed cost	Sum of Buy lines Per unit; Per year lines + One-off lines / horizon.	currency/unit, currency
Units made and bought	Made = demand x internal share; bought = demand - made.	units/yr
Make cost and buy cost	Made x avoidable make cost per unit + make fixed cost, only when units are made; bought x delivered buy cost + buy fixed cost, only when units are bought.	currency/yr
Total cost, cost to buy all and saving	Total = make cost + buy cost. Buy all = demand x delivered cost + buy fixed cost. Saving = buy all - total.	currency/yr
Cost per good unit	Total cost / demand (blended across make and buy).	currency/unit
Break-even volume	(Make fixed - buy fixed) / (delivered buy cost - avoidable make cost per unit), when buying costs more per unit. Above it, making all costs less than buying all.	units/yr
Capacity check	Hours = units made x hours per unit; share = hours / available hours on Setup. Under capacity below the near-capacity share, Near capacity up to 100%, Over capacity above.	h/yr, %
Weighted factor scores	Sum of weight x score / sum of weights, for make and for buy, on the 1-5 scale.	of 5

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 Thornbury Hydraulics, 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.

Make vs Buy Analysis

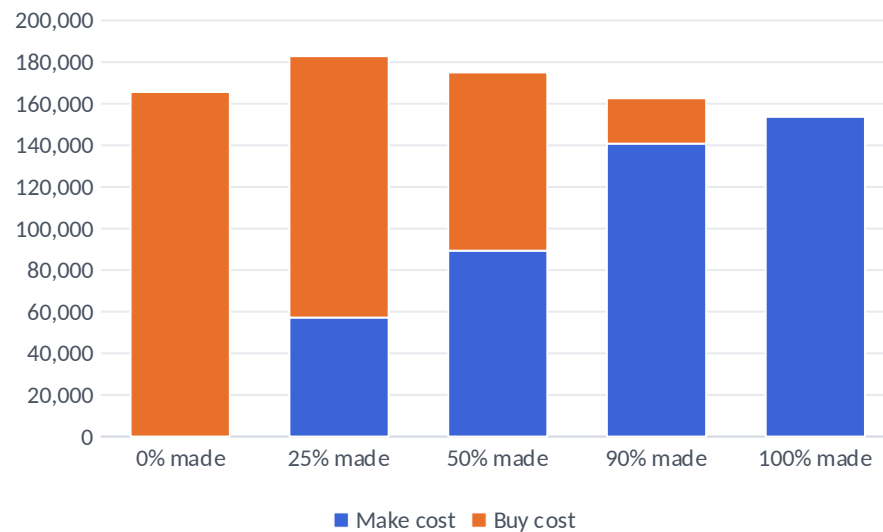
The make-or-buy decision for the part on one page: costs, break-even, capacity and strategic factors.

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Rod-end bracket RB-50 (example): 18,000 good units a year; your plan makes 90% in-house. Money in GBP.

PLAN SAVING AGAINST BUYING ALL (GBP/YR)	LOWEST ANNUAL COST	BREAK-EVEN VOLUME (UNITS/YR)	CAPACITY USED BY YOUR PLAN
3,026	Make all (over capacity)	11,098	97.2%
Positive = your plan costs less	Make all 153,700, buy all 165,640	Make all is cheaper above it; demand 18,000	Limit 100.0%
			Near capacity

Annual cost by internal share



Make all vs buy all, by annual volume

