

ABC Inventory Analysis

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

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ABC Inventory Analysis

Rank every item by annual usage value, split the list into A, B and C classes at your own cut-offs, and see where usage value and stock sit.

For: Inventory planners, materials and supply-chain managers, buyers and warehouse leads setting count, review and stocking policies.

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Quick start

1. On Setup, type your company name and currency, check the A and B cut-offs and set how often each class is cycle counted.
2. On Item List, paste your items with annual usage, unit cost and units on hand (an ERP usage and stock export). Rank and class update at once.
3. Fix anything the Check column flags: a category not on the list, an item listed twice, a unit cost of 0.
4. Open the Dashboard: the ABC curve, what each class holds, and the ten items that carry the most usage value.

What is in the workbook

Start Here	Read this first: what the workbook does and how to use it.
Setup	Company, currency, your class cut-offs and cycle-count policy, and the item categories.
Item List	One row per item: annual usage, unit cost and stock on hand, ranked into A, B and C classes.
Dashboard	Where annual usage value and stock sit by ABC class, the ABC curve, and the items that carry the most value.
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
Annual usage value	Annual usage x unit cost, per item.	currency/year
Share of usage value	Item usage value / the total over all items.	%
Rank	1 = highest usage value; equal values are ordered by item code. Excel: =RANK(value, all values, 0) + COUNTIFS(values, value, items, "<"&item)	-

Quantity	How it is calculated	Units
Cumulative share	Usage value of this item and every item ranked above it / the total (SUMIFS over Rank <= this rank).	%
Class	Share held by the items ranked above = cumulative share - own share. A if that is below the A cut-off, B if below the B cut-off, otherwise C.	A, B, C
Stock value	Units on hand x unit cost.	currency
Counts per year	The Setup count frequency for the item's class.	counts/year
Class roll-ups	COUNTIFS and SUMIFS by class; shares are class totals / all-item totals; turns = class usage value / class stock value.	-
ABC curve	For each share of items p (0% to 100% in 10% steps): the usage value of the top ROUNDUP(p x items) items / the total.	%
Top ten	Items looked up by Rank 1 to 10 with INDEX/MATCH.	-

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 Kestrel Valve Works, 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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Where annual usage value and stock sit by ABC class, the ABC curve, and the items that carry the most value.

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Showing 40 items for Kestrel Valve Works (example). Class A: items that start below 80% of cumulative usage value; B: below 95%; C: the rest.

ANNUAL USAGE VALUE (USD)	A CLASS: SHARE OF USAGE VALUE	A CLASS: SHARE OF ITEMS	C CLASS: SHARE OF STOCK VALUE
2,611,085	80.0%	17.5%	21.8%
Annual usage x unit cost, all items	Set by the A cut-off on Setup	The few items that need tight control	Stock held in low-usage items

