ARDENT SELLER

A FREE STARTER FROM ARDENT SELLER

The 3D Print Cost & Filament Log Starter

A fill-in worksheet for what one print really costs — printer wear and failed prints included — plus a print-and-use filament spool log.

Stop pricing prints like they cost their filament.

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“It's just three dollars of filament” is how print shops lose money. A print's true cost is six lines — and the filament is usually the smallest one. This free starter walks you through costing one print on one printer, the honest way: the material, the electricity, the printer wearing out underneath the job, a buffer for the prints that fail, your post-processing time, and the packaging. Then a printable filament spool log keeps a 14-hour print from running dry at 2 a.m.

A SHOP REFERENCE, NOT CERTIFICATION

Every figure in the example is illustrative — your material prices, power draw, printer lifetime, and labor rate are yours to enter. Printer-lifetime figures are planning assumptions, not manufacturer ratings. Costing and pricing examples are illustrative, not financial advice. And selling prints of someone else's model requires a license that allows it — checking is your responsibility.

STEP 1 · THE LINE EVERYONE'S SPREADSHEET IS MISSING

Your printer's machine rate

Every print-hour uses up a little of the machine — nozzles, belts, build surfaces, and one day the printer itself. A machine rate charges for it a few cents at a time.

Cost line	How to find it	Your number
Printer purchase price	What you paid, with any upgrades you consider part of the machine — e.g. $600	
Expected resale / salvage value	A conservative guess at what it's worth when you retire it — e.g. $100, or $0 if you'll run it into the ground	
Expected lifetime print-hours	A planning assumption, not a manufacturer rating — there's no standard published lifetime for hobby and prosumer printers. Pick a conservative figure (e.g. 4,000 hours) and revisit it as you learn your machine.	
Maintenance allowance ($/print-hour)	A set-aside for nozzles, build surfaces, belts, fans, and repairs — e.g. $0.10/hr. Your Maintenance Log will tell you the real figure over time.	
Depreciation per hour	(price − resale) ÷ lifetime hours	
YOUR MACHINE RATE ($/hr)	depreciation + maintenance allowance — carry this to Step 2	

Worked example	Figure (illustrative)
Depreciation per hour	**($600 − $100) ÷ 4,000 hr = $0.125/hr**
+ Maintenance allowance	**$0.10/hr**
Machine rate	**$0.225 per print-hour**
Machine cost of a 9-hour print	**9 hr × $0.225 = $2.03 (rounded)**

STEP 2 · FILL IN ONE PRINT

The true print-cost worksheet

Cost your best-selling print first. Use your slicer's estimates for the grams and hours, and write each line in the amber box. Add them up — that total is the floor under your price (a common starting point: wholesale ~ 2× cost, retail ~ 2× wholesale; your market sets the real number).

Cost line	How to find it	Your number
Material	Grams × cost per kg ÷ 1,000 — use the slicer's estimate (it includes supports and purge)	
Electricity	Average watts ÷ 1,000 × print hours × your $/kWh rate	
Machine rate (depreciation + maintenance)	From the Printer Profiles tab — machine rate × print hours	
Failed-print buffer	A % of the material + electricity + machine lines above — failures are a normal cost of running printers; your Failed-Print Log tells you your real rate	
Post-processing & handling labor	Honest minutes (support removal, cleanup, assembly, QC, packing) × your hourly rate	
Packaging & materials	Box, padding, label for a sold print	
TRUE COST PER PRINT	add the six lines above — your price floor	

WORKED EXAMPLE — AN ARTICULATED DRAGON — 120 G OF FILAMENT, A 9-HOUR PRINT

$2.64 + $0.16 + $2.03 + $0.48 + $4.40 + $0.60 = $10.31 true cost — for a print whose filament cost $2.64. Suggested wholesale $20.62, retail $41.24. (Illustrative figures — your numbers will differ.)

PART 2 · PRINT ONE FOR THE SHELF

Filament spool log

Remaining filament is one subtraction: weigh the spool on a kitchen scale, subtract the empty-spool weight (manufacturers often list it — or weigh one of your own empties once per brand). Re-weigh after long prints, and reorder before the remaining grams drop below your longest print plus shipping days.

Spool / bottle ID	Material	Color	Cost	Gross (g)	Empty (g)	Remaining (g)	Reorder at

Run the whole shop, not just one print

This worksheet is one page of the kit. The 3D-Printing Shop's Filament & Print-Cost Workbook is the whole business side of a print shop: a working Excel print-cost calculator (this worksheet, with the math done for you), printer profiles that compute a machine rate for every FDM and resin machine you own, a filament & resin inventory with remaining grams and an automatic REORDER flag, a print job queue, a failed-print log with an 11-mode troubleshooting guide, a maintenance log, and a per-model pricing catalog that re-prices everything when anything changes — a working Excel workbook (8 tabs, 3 live calculators) plus five PDF guides. Evergreen.

The living version of a shop workbook

A spreadsheet is a wonderful place to start a print shop and a hard place to scale one. The moment you're running several printers, dozens of spools, and a real order queue, a stack of tabs starts to creak.

A note on the numbers. This is a shop reference, not certification. Every figure in the examples is illustrative; printer lifetimes are planning assumptions, not ratings; costing and pricing examples are not financial or tax advice. Materials and machines carry real hazards — follow your printer manufacturer's safety guidance and your materials' safety data sheets. Selling prints of someone else's model requires a license that allows it.