Rotational Molding Cost Estimator

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

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Estimate a rotationally molded part's cost from powder charge, mold-bank cycle, oven energy, finishing, setup and mold, and price five order quantities.

For: Rotational molding estimators, sales and plant managers, and buyers of tanks and rotomolded parts.

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Quick start

1. On Setup, type your company, currency, labour rate, gas and electricity prices, overhead, margin and price step, then your materials and machines.
2. On Part Estimate, choose the material and enter the midwall surface area, wall thickness, measured loss and inserts.
3. Choose the machine or arm and enter parts per cycle, cycle time, shift time, operator minutes and gas and electricity per cycle.
4. Enter finishing minutes, acceptance, setup, packaging and mold, then five order quantities.
5. On the Dashboard, pick a quantity to see the tiles, the two charts and where the cost goes.

What is in the workbook

Start Here	Read this first: what the workbook does and how to use it.
Setup	Your company, currency, costing defaults, materials and machine rates.
Part Estimate	The part, powder charge, mold-bank cycle, finishing, setup and mold, and cost and price for five order quantities.
Dashboard	Price, cost and margin per part at the order quantity you pick, and where the cost of a part goes.
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.
About MFG Calcs	Everything MFG Calcs offers, free: calculators, templates, tariff tools, data and the Calkee AI helper.

What each number means

Quantity	How it is calculated	Units
Wall volume and mass	Volume (L) = midwall area (m2) x wall (mm); mass (kg) = area x wall x density (kg/m3) / 1,000.	L, kg
Powder charge	Wall mass + measured loss per part.	kg

Quantity	How it is calculated	Units
Material and inserts per part molded	Powder charge x material price + inserts and fittings.	currency
Cycles and parts per shift	FLOOR(shift minutes x 60 / cycle seconds); parts = cycles x parts per cycle; time short of another cycle = shift minutes - cycles x cycle / 60.	cycles, parts, min
Cost of a cycle	Machine or arm rate x cycle hours; operator minutes / 60 x labour rate; gas x gas price + kWh x electricity price.	currency
Parts to mold and cycles	CEILING(order quantity / acceptance); cycles = CEILING(parts to mold / parts per cycle).	parts, cycles
Cost lines per accepted part	Material x parts to mold; machine, operators and energy x cycles; finishing minutes x parts to mold; setup hours x (machine rate + labour rate); all / quantity, plus mold, packaging and overhead = (machine + labour + setup) x overhead %.	currency/part
Price per part	CEILING(total cost / (1 - target margin), price step); margin achieved = (price - cost) / price.	currency/part
Material to order	Parts to mold x powder charge.	kg

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 Kelderwick Rotomoulding, 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.

Rotational Molding Cost Estimator

Price, cost and margin per part at the order quantity you pick, and where the cost of a part goes.

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Order quantity shown 100

Showing 100 parts of WT-500-BK in LLDPE, black UV-stabilised, 17.9 kg of powder each. Pick another quantity in the yellow cell.

PRICE PER PART (USD)	COST PER PART (USD)	MARGIN ACHIEVED	POWDER CHARGE PER PART (KG)
117.00	**90.94**	**22.3%**	**17.92**
Order value 11,700 USD	All lines, before margin	Target 22.0%	Wall 5.0 mm over 3.77 m2
		On target	

Price and cost per part by quantity



Where the cost per part goes

