

DEFAULT RATES This estimate uses regional default machine and labor rates, not your supply base. Treat the range as the answer, not the midpoint.

SHOULD-COST TEARDOWN

Sample block, 4 x M8 clearance

6061-T6 Aluminum · Precision $\pm .002$ / Ra 63 · Anodize, Type II · United States, Midwest

SHOULD-COST / PC

\$34.53

range \$30.90-\$38.15 ·
±10%

BEST ROUTING

3-Axis VMC

9.6 min cycle

LOT OF 250

\$8,632

should-cost total

YOUR QUOTE / PC

\$58.00

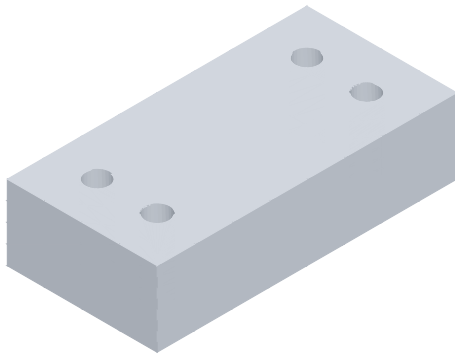
68% OVER

+\$23.47 / pc · \$5,868
on this lot

Your quote is **68% above modeled cost** — about \$5,868 on this lot. The teardown below shows where that could be sitting.

The part

isometric view, drawn from your STEP file



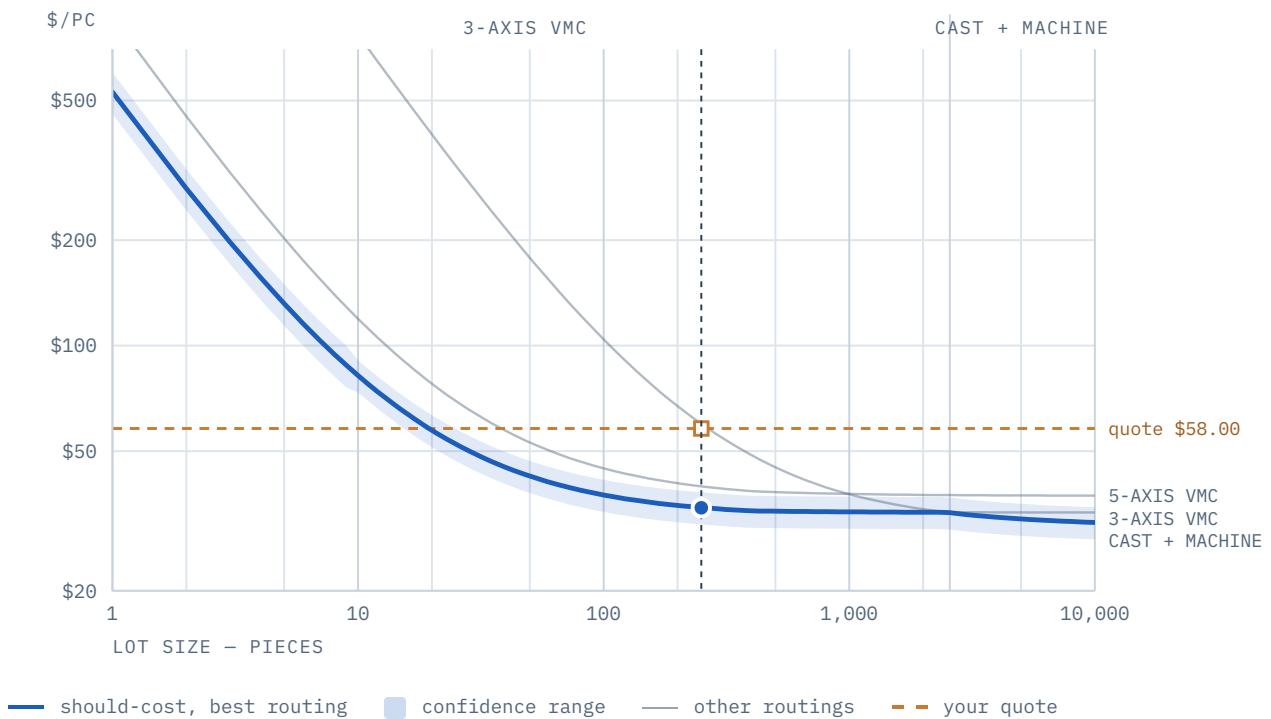
What we measured, and what we assumed

measured from the solid unless marked

FINISHED VOLUME	120.0 cm ³
STOCK VOLUME	184.0 cm ³ with machining allowance
SURFACE AREA	196.1 cm ²
HOLE OPERATIONS	4
SETUPS	2 on 3-Axis VMC
INSPECTED DIMS	6 estimated — belongs on the drawing
SUPPLIER MARGIN	18% assumed

Unit cost against lot size

every routing that can make this part · the blue line is the cheapest at each lot size



Cost teardown

per piece at 250 · 3-Axis VMC

Material	\$3.26
Machining	\$14.12
Setup	\$0.47
Programming, tooling	\$0.47
Secondary ops	\$5.14
Inspection	\$4.64
Scrap / yield	\$0.87
Supplier margin	\$5.21
Freight, duty	\$0.35

SHOULD-COST / PC

\$34.53

What moves the number

change in unit cost if one input moves, everything else held

Tolerance one class tighter		+\$9.79
Secondary ops removed		-\$5.16
Tolerance one class looser		-\$5.13
Sourced to Mexico		-\$3.92
Lot size halved		+\$1.98
Supplier margin -5 pts		-\$1.45

■ cheaper ■ dearer

Every lot size

cheapest routing and confidence range at each quantity

LOT SIZE	SHOULD-COST	RANGE	BEST ROUTING
1	\$529	\$457-\$600	3-Axis VMC
5	\$132	\$114-\$150	3-Axis VMC
10	\$82	\$74-\$91	3-Axis VMC
26	\$52	\$46-\$57	3-Axis VMC
48	\$43	\$38-\$47	3-Axis VMC
100	\$38	\$34-\$41	3-Axis VMC
257	\$34	\$31-\$38	3-Axis VMC
481	\$34	\$30-\$37	3-Axis VMC
1,000	\$34	\$30-\$37	3-Axis VMC
2,565	\$33	\$30-\$37	Cast + Machine
4,806	\$32	\$29-\$35	Cast + Machine
10,000	\$31	\$28-\$35	Cast + Machine

READ THIS BEFORE QUOTING ANYONE

- Machine and labor rates are **regional defaults**, not your supply base. Calibrating them against what you have actually paid is what moves this from a triage tool to a negotiation number.
- Cost is driven as much by the **drawing** as the model — tolerances, finish callouts, material certs and inspection level.
- Treat the **range**, not the midpoint, as the answer.