Hull Layup Labor Hours

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

Hull Layup Labor Hours

Estimate hand layup hours for every laminate zone of every hull, with person-hours, labor cost and hours per square metre against the quote.

For: Lamination foremen, production planners and estimators in boatbuilding and composite fabrication shops.

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Quick start

1. On Setup, type your yard, currency, labor rate and near band, and list your hulls with their mold area and quoted person-hours.
2. On Zones, give each laminate zone of each hull a row: area, layers, crew layup rate, allowance and crew size.
3. Fix anything the Check column names.
4. Open the Dashboard: person-hours against the quote for every hull, and where the layup hours go.

What is in the workbook

Start Here	Read this first: what the workbook does and how to use it.
Setup	Yard, currency, labor rate, the near band, and the hulls with their mold area and quoted person-hours.
Zones	One row per laminate zone of each hull: area, layers, crew rate, allowance and crew in; layup hours, person-hours and cost out.
Dashboard	Layup hours, person-hours and cost for every hull against its quote, and where the hours go.
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
Laminate area	Zone area x layers.	m^2
Base, allowance and layup hours	Laminate area / crew rate; base x allowance; base + allowance.	h
Hours per m2	Layup hours / zone area; for a hull, its layup hours / mold area.	h/m^2
Person-hours and labor cost	Layup hours x crew size; person-hours x labor rate.	person-h, currency

Quantity	How it is calculated	Units
Hull status	On target at or under the quoted hours, Near target within the band over, Above target further over.	-

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 Marine, 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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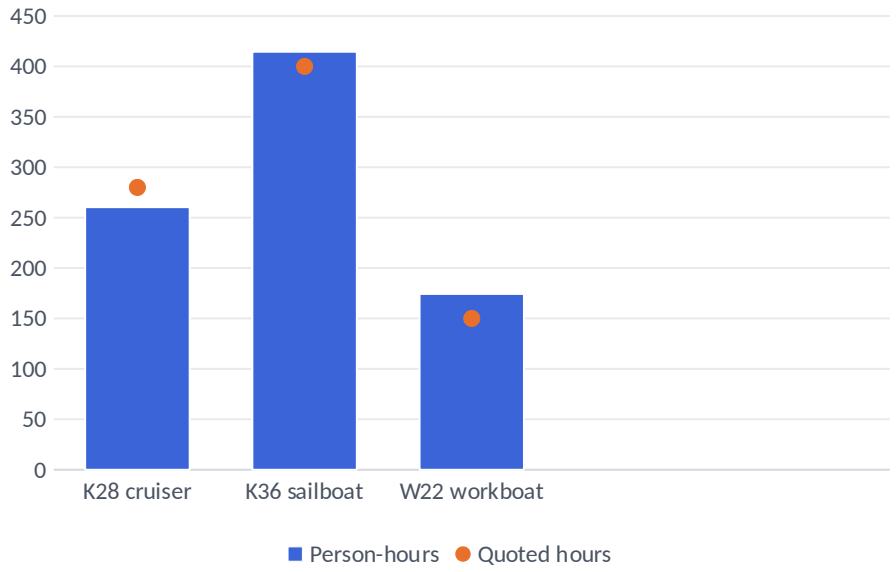
Layup hours, person-hours and cost for every hull against its quote, and where the hours go.

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Kestrel Marine (example): 9 zones on 3 hulls. Labor at 48.00 USD a person-hour.

LAYUP HOURS	PERSON-HOURS	LABOR COST	HULLS OVER QUOTED HOURS
336.1	**849.1**	**40,759**	**1**
Elapsed crew hours	Layup hours x crew size	Person-hours x labor rate	Beyond the near band

Person-hours against quoted hours, by hull



Layup hours by zone

