

First Pass Yield Tracker

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

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First Pass Yield Tracker

Log each operation's first-pass results and see FPY, rolled throughput yield and the cost of rework and scrap as you type.

For: Quality and process engineers, Six Sigma and continuous-improvement teams, and production managers.

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Quick start

1. On Setup, type your plant name, currency and RTY target, then list your operations in process order with each one's FPY target and its rework and scrap cost per unit.
2. On Yield Log, add one row per operation per day: units in, units that passed first time (no rework) and units scrapped. Reworked units are calculated.
3. Read the Check columns: anything other than OK names the problem in words.
4. Open the Dashboard: RTY, FPY by operation against target, where yield is lost and what rework and scrap cost. Use the date filters for one week.

What is in the workbook

Start Here	Read this first: what the workbook does and how to use it.
Setup	Your plant, currency, RTY target, and the operations in process order with FPY targets and rework and scrap costs.
Yield Log	One row per operation per day: units in, passed first time and scrapped. Rework, yields and costs are calculated.
Dashboard	Rolled throughput yield, FPY by operation, the hidden factory and its cost, for the dates you choose.
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
Failed first time	Units in - passed first time.	units
Reworked	Units in - passed first time - scrapped: failures that were repaired or retested.	units
FPY	Passed first time / units in. Over several rows: sum of passed / sum of units in.	%

Quantity	How it is calculated	Units
Yield after rework	(Units in - scrapped) / units in.	%
FPY status	On target at or above the operation's FPY target; Near target within the near-target band below it; Below target under that.	-
Rework and scrap cost	Reworked x rework cost per unit, and scrapped x scrap cost per unit (Operations list).	currency
RTY	The product of the FPYs of the operations with data in view. Cumulative RTY multiplies them up to each operation in list order. Excel: =PRODUCT(INDEX(fpy range,1):this operation's FPY)	%
Process yield after rework	The product of the operations' yields after rework.	%
Weekly RTY	FPY of every operation in each week (Monday to Sunday), multiplied across the week's row.	%
Dashboard roll-ups	SUMIFS over the Yield Log restricted to rows whose View date is filled in (inside the date filters).	-

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 Brightwater Electronics, 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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Rolled throughput yield, FPY by operation, the hidden factory and its cost, for the dates you choose.

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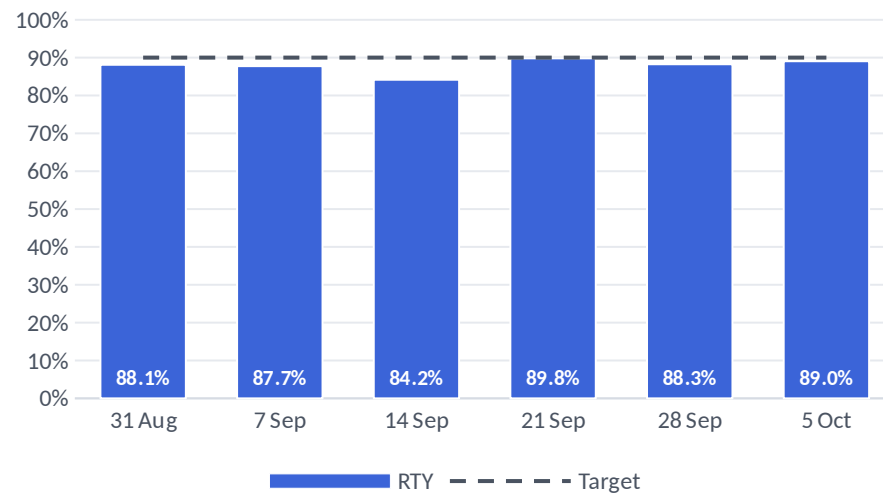
From

To

Showing 180 log rows. Leave the filters blank to include everything; dates are inclusive.

ROLLED THROUGHPUT YIELD	YIELD AFTER REWORK	LOWEST FIRST-PASS YIELD	REWORK AND SCRAP COST (USD)
87.9%	99.1%	30 Wave solder	16,987
Target 90.0%	Units not scrapped, all operations	Operation with the lowest FPY	Reworked x rework cost + scrapped x scrap cost
Below target			

Rolled throughput yield by week



First-pass failure rate by operation

