

Hour-by-Hour Production Board

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

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Hour-by-Hour Production Board

Log each line's output every hour against a takt-based target and see the running plan vs actual, the hours that miss and why, by line, day and hour of the shift.

For: Team leaders, cell leaders, shift supervisors and production managers who run a line to takt and review it hour by hour.

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Quick start

1. On Setup, type your plant name and hourly attainment target, then replace the example lines, shifts, hour slots, products (with their takt times) and miss reasons.
2. Each hour, add one row per line on Hourly Board: the hour of the shift, the product, the minutes available in that hour and the good units made.
3. When an hour misses its target, pick the miss reason and write the countermeasure; the Check column asks for it.
4. Open the Dashboard: filter by line, or set From and To to one day, and read which hours and which reasons lost the most units.
5. To print one shift's board for the line, pick the date, shift and line on Daily Board. A date with no rows prints a blank board to fill in by hand.

What is in the workbook

Start Here	Read this first: what the workbook does and how to use it.
Setup	Plant name, the hourly target, and the line, shift, hour-slot, product (takt time) and miss-reason lists.
Hourly Board	One row per line per hour: the minutes available, the units made, and why an hour missed.
Daily Board	One shift's hour-by-hour board for one line, to print and hang by the line or review at the shift handover.
Dashboard	Hourly attainment against takt, where in the shift the units are lost, and why, for the line and 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
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Quantity	How it is calculated	Units
Takt time	Looked up from the Products list on Setup by product (INDEX/MATCH): available time / customer demand, in seconds per unit.	s/unit
Target	INT(available minutes x 60 / takt): the whole units the hour should make at takt.	units
Gap	Actual - target. Negative is units short.	units
Short	MAX(0, target - actual): the hour's shortfall, never negative.	units
Attainment	Actual / target. Over several rows: sum of actual / sum of target.	%
Hit	1 when actual >= target x the hourly attainment target on Setup, else 0. Hours on target = sum of hits / hours with a target.	-
Hour status	On target at or above the attainment target, Near target within 5% below it, Below target otherwise.	-
Cumulative target and actual	SUMIFS of target and actual over the rows with the same date, shift and line and an hour up to this row's hour.	units
Pareto	Units short summed by miss reason, ranked by COUNTIF ranks with share and cumulative share. Hidden helper columns AO:AQ hold the unsorted values and ranks.	units, %
Dashboard roll-ups	SUMIFS over the Hourly Board restricted to rows whose View date is filled in (inside the line and date filters).	-
Daily Board	For the date, shift and line chosen on that sheet: SUMIFS of minutes, target and actual per hour and up to each hour; product, miss reason and countermeasure by INDEX at the matching row (SUMPRODUCT finds its position). Starts = the shift's start time on Setup + (hour - 1) / 24.	units, %

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 Calder Pump Assembly, a fictional business.

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Hour-by-Hour Production Board

Hourly attainment against takt, where in the shift the units are lost, and why, for the line and dates you choose.

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Line

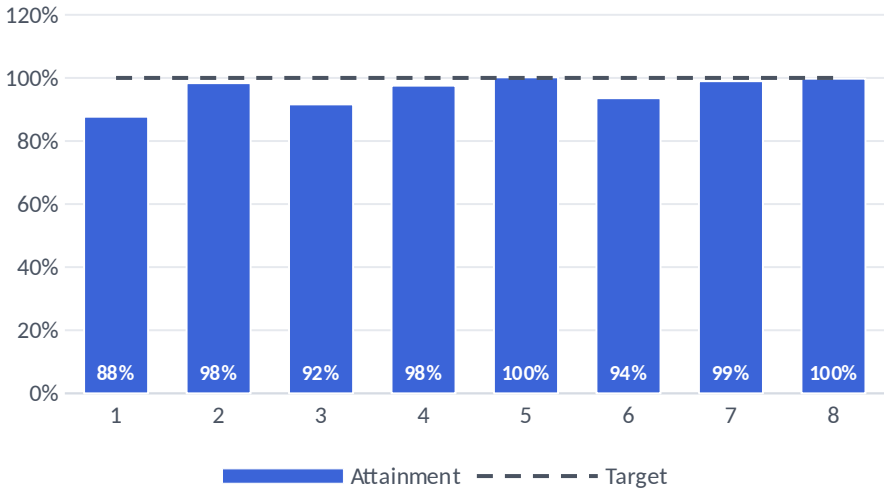
From

To

Calder Pump Assembly (example): 320 line-hours in view. Leave the filters blank to include everything; dates are inclusive.

ATTAINMENT	HOURS ON TARGET	UNITS SHORT	WEAKEST HOUR OF THE SHIFT
95.6% Target 100.0% Near target	41.6% Share of logged hours that reached the target	1,474 Sum of each missed hour's shortfall	Hour 1 Lowest attainment, see the hour chart

Attainment by hour of the shift



Attainment by day

