Connector Seating Capacity

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

Connector Seating Capacity

Check every connector seating station's good capacity for the week against the demand it must cover, with its downtime and yield losses.

For: Wire harness production planners, manufacturing engineers and cell leads scheduling connector insertion and seating.

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Quick start

1. On Setup, type your plant, the planning window and the near-capacity threshold.
2. On Stations, give each station a row: connector family, connectors per cycle, hours, cycle time, uptime, first-pass yield and demand.
3. Fix anything the Check column names.
4. Open the Dashboard: good capacity against demand, and where each station loses output.

What is in the workbook

Start Here	Read this first: what the workbook does and how to use it.
Setup	Plant, the planning window and the near-capacity threshold.
Stations	One row per seating station: rate, hours, uptime, yield and demand in; good capacity, losses and load out.
Dashboard	Good seating capacity of every station against its demand, and where each station loses output.
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
Available cycles	Hours x 3600 / cycle time.	cycles
Gross capacity	Connectors per cycle x available cycles.	connectors
Downtime and yield losses	Gross x (1 - uptime); gross x uptime x (1 - first-pass yield).	connectors
Good capacity	Gross x uptime x first-pass yield.	connectors
Load and status	Demand / good capacity; Over capacity above 100%, Near capacity from the threshold on Setup.	%, -

Quantity	How it is calculated	Units
Shortfall and extra hours	Demand - good capacity when positive; / (connectors per cycle x uptime x yield) x cycle time / 3600.	connectors, h

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 Linwood Harness Systems, 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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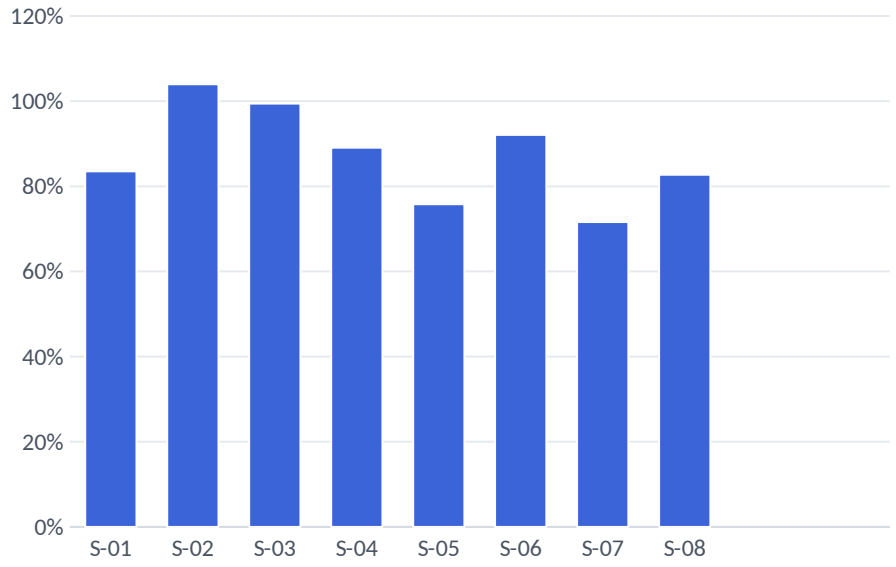
Good seating capacity of every station against its demand, and where each station loses output.

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Linwood Harness Systems (example), Week 47: 8 stations, 287,500 connectors to seat.

STATIONS	GOOD CAPACITY	DEMAND	STATIONS OVER CAPACITY
8	**304,694**	**287,500**	**1**
Rows on Stations	Gross x uptime x yield, all stations	Connectors to seat, all stations	Demand above good capacity

Demand as a share of good capacity (100% = full)



Where gross capacity goes, by station

