Pump Alignment Planner

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

Pump Alignment Planner

Plan the time to align every package of pump-motor sets from the sets, crews, rate and allowance, against the window each package has.

For: Maintenance planners, shutdown coordinators, millwrights and pump packagers scheduling shaft alignment.

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Quick start

1. On Setup, type your plant and currency, the near-capacity threshold, the people in a crew and the loaded rate per person-hour.
2. On Packages, give each package a row: area, sets, crews, sets per crew-hour, setup and shimming allowance, and the window.
3. Fix anything the Check column names.
4. Open the Dashboard: required time against the window, and the packages that do not fit.

What is in the workbook

Start Here	Read this first: what the workbook does and how to use it.
Setup	Plant, currency, the near-capacity threshold, crew size and the loaded labour rate.
Packages	One row per alignment package: sets, crews, rate, allowance and window in; required time, margin and labour out.
Dashboard	Alignment time against the window for every package, and the crew hours and labour cost it takes.
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
Team rate	Crews x sets per crew-hour.	sets/h
Base time	Sets / team rate.	h
Required time and allowance hours	Base time x (1 + allowance); required - base.	h
Window margin and load	Window - required time; required time / window.	h, %

Quantity	How it is calculated	Units
Status	Over capacity above 100% of the window; Near capacity from the threshold on Setup; otherwise Under capacity.	-
Crew hours and labour cost	Required time x crews x people per crew; x loaded rate per person-hour.	h, currency

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 Halverston Works, 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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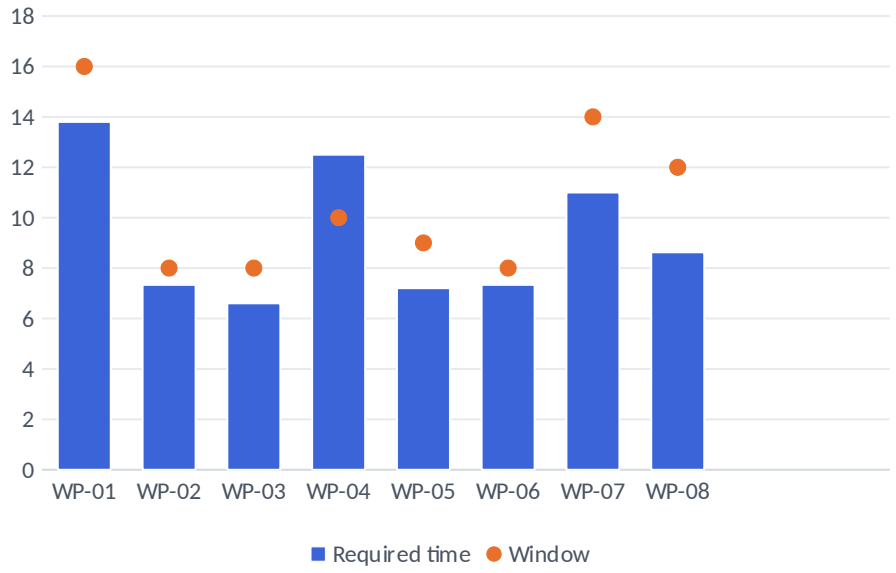
Alignment time against the window for every package, and the crew hours and labour cost it takes.

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Halverston Works, annual shutdown (example): 8 packages, 48 pump-motor sets, crews of 2. Amounts in USD.

PACKAGES	SETS TO ALIGN	OVER THEIR WINDOW	LABOUR COST
8	**48**	**1**	**16,239**
Rows on Packages	All packages	Required time longer than the window	Crew hours x loaded rate

Required time against window (h)



Base and allowance hours by package

