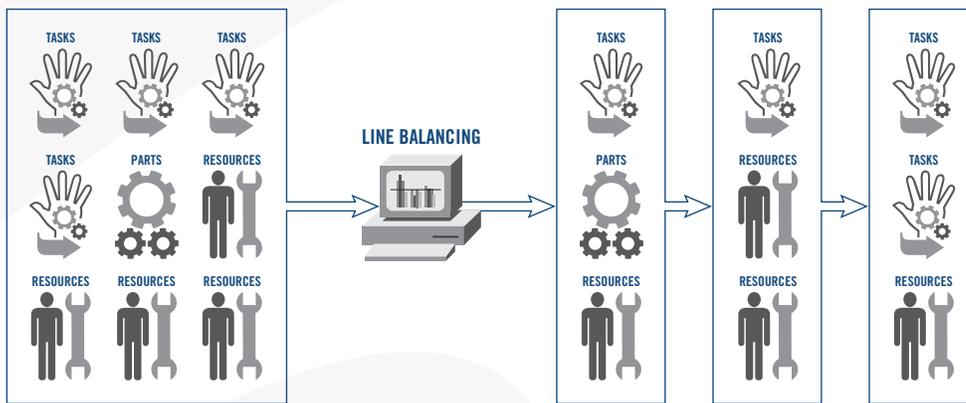


THE PROBALANCE MIXED-MODEL LINE BALANCING APPLICATION WILL IMPROVE YOUR LINE EFFICIENCY UP TO 20%, REDUCE LABOR BY NEARLY 10%, AND HELP ELIMINATE DEPLOYMENT ERRORS.

If you are a manufacturer of complex assemblies involving 100's to 1,000's of parts and processes with an extensive portfolio of model and option configurations, then ProBalance is for you. ProBalance was designed by industrial engineers to create the most efficient single- and mixed-model assembly lines quickly and easily, while minimizing errors often found during deployment. Whether you are designing new assembly lines, adding new products and/or product enhancements to existing lines, or changing your product mix and production rate, ProBalance will ensure the most efficient designs possible.



PROBALANCE WILL IMPROVE LINE EFFICIENCY AND LAUNCH ACCURACY.

- Increased Line Throughput by 22%
- Reduced labor by 10%
- Cut Assembly Line Operating costs by \$50K per month
- Saved over 2 weeks of engineering time per re-balance, and nearly eliminated deployment errors related to task, part, and resource placement.

LINE BALANCING OPTIMIZATION, CHARTING AND REPORTING INTEGRATED WITH MS EXCEL

If you are currently doing your line-balancing studies in MS Excel, you will appreciate the integrated ProBalance method of simultaneously updating individual spreadsheets, including Tasks, Stations, Resources, Operators, Precedence, Models, Options, Parts and Part Zones. Whether you use the automatic assignment algorithms or manually allocate your tasks and resources, ProBalance's intuitive interface and integrated charting and reporting features will make creating and presenting new assembly designs quick, simple and accurate. ProBalance can even download your design scenarios to Proplanner's popular Workplace Planner application so that you can automatically evaluate Model/Option sequence to the line, calculate station cycle times and diagram operator walkpaths in AutoCAD.

Proplanner was founded by Dr. David Sly, a world renowned expert in Process and Plant Engineering systems that extend and integrate the capabilities of current applications such as AutoCAD and Excel. Since Dr. Sly invented the first CAD-based material flow analysis application 20 years ago (a predecessor to Flow Planner), he has created a suite of powerful and integrated applications for Time Estimation, Process Management, Ergonomics Assessment, Line Balancing, and Workplace Design.

INFORMATION: 1-515-296-9914 • INFO@PROPLANNER.COM • WWW.PROPLANNER.COM

3-STEP PROCESS

USING PROBALANCE ON YOUR NEXT ASSEMBLY LINE CHANGEOVER IS AS SIMPLE AS 1, 2, 3.

1. Begin by creating or importing a spreadsheet of sequenced process tasks and their associated process times, resource requirements and model/option dependencies. This information can be imported from Assembly Planner or other popular process databases, or even authored within ProBalance's spreadsheet interface.

2. Go to the Stations and Resources tabs to define which resources are fixed to what stations. Then proceed to the Models and Options tabs to define their "take rate" (probabilities of occurrence). Optionally, you can even define task groups (those that must move together), or even graphically define detailed task precedence.

3. Now select the "Auto Balance" option. Choose whether you want the application to determine the number of stations required to reach a fixed TAKT time or if you want it compute the required TAKT time for a fixed number of stations. ProBalance gives you the station assignment graph and task listings. Then you can manually adjust your task and resource assignments. You will also be able to generate your task and station utilization reports to help you sell and implement your new design.

IF YOU HAVE A SPREADSHEET OF ASSEMBLY LINE TASKS AND TIME, THEN YOU ARE LESS THAN 1 HOUR FROM AN EFFICIENT, ACCURATE AND WELL DOCUMENTED ASSEMBLY LINE PLAN.



THE QUICKEST, EASIEST AND MOST ACCURATE WAY TO ASSIGN TASKS TO STATIONS.

ProBalance consists of powerful automatic optimization algorithms integrated with manual drag-and-drop task assignment features combined with intuitive charting and reporting. ProBalance is built around a familiar spreadsheet interface.

PRO BALANCE

BASIC VERSION FUNCTIONS:

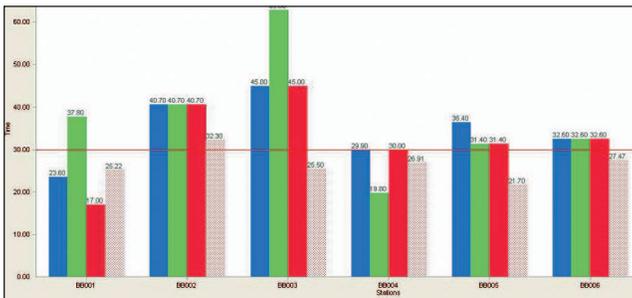
- Single Model Balancing
- Mixed Model Balancing
- Resource Constraints
- Multiple Work Zones Within a Station
- User-Defined Work Zones/ Two-sided Lines
- Take Rate Calculated from Model/Option Mix
- Reporting of Reassigned Tasks, Parts, and Stations
- Integration with Workplace/Flow Planner
- Balancing Station View
- Lean Charts & Reporting
- Lean Yamazuki Charts
- Report Customization
- Graphical and Textual Precedence Authoring
- Spreadsheet Interface
- Cut, Copy and Paste Data from MS Excel

ADVANCED VERSION FUNCTIONS:

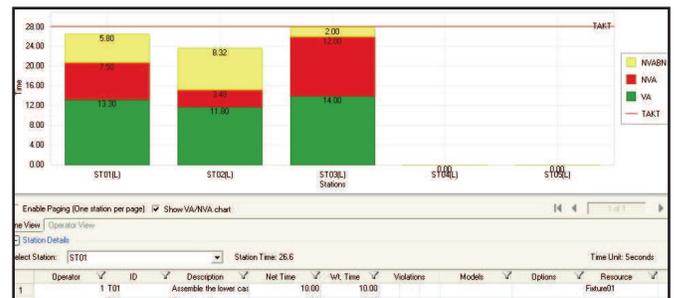
- Multiple Operators Within a Station
- Task Grouping
- Ergonomics Factoring
- Clustered Precedence Authoring
- Parts and Containers Assigned to Tasks
- Graphical Images for Parts and Tasks
- Auto-improvement for Existing Balance
- Add Space Planning For Tools and Parts

MAINTENANCE PROGRAM:

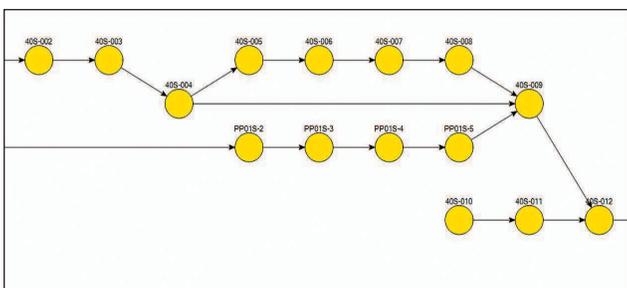
- Product Updates & Phone Support
- Email Support
- Web Training
- Purchase or Monthly Subscription



Balance



Lean Yamazuki Charts



Precedence

ID	Description	Net Time	Wt. Time	Violations
1	PP01S-1 Move Casting	12.00	3.60	
2	PP01S-3 Welding	16.00	16.00	
3	40S-002 Press U-Cup into housin	6.60	1.98	M
4	40S-003 Lubricate and press gic	8.00	8.00	M
5	40S-011 Place motor cover on h	14.70	14.70	
6	40S-005 Place impeller onto mot	7.50	1.50	M
7	40S-007 Lubricate and feed two	18.00	7.20	R
8	40S-014 Place o-ring onto retain	16.00	4.80	

Violations