



S&I

 SYSTEMS &
INTEGRATION

TURNKEY PACKAGING LINES



ZARPAC provides turnkey packaging line design and single source project management services for complete and partial packaged goods production lines

ZARPAC provides single source, turnkey packaging line design and project management services for fully integrated complete and partial packaged goods production lines.

We specialize in projects requiring optimized OEE line performance and single source accountability to ensure successful customer outcomes.

In our single source approach to turnkey packaging lines we assume responsibility for the entire project, from kick-off to hand-off.

This includes defining capability specifications, completing site assessments, designing line layouts, evaluating and purchasing equipment, programming, installing, testing, training, and commissioning complete or partial packaging production lines that will meet or exceed customer expectations.

ZARPAC's turnkey packaging line team includes highly trained engineers, controls programmers and project managers that specialize in designing, optimizing and implementing full or partial production lines. We bring a depth of packaging expertise and know-how to each project that our competitors simply cannot match.

WHAT SETS US APART FROM THE COMPETITION?

- We are packaged goods manufacturing and packaging equipment experts. We are not architects, civil engineers or process engineers who venture into packaged goods manufacturing.
- We guarantee that our customers never have to live with the consequences of the **5 Deadly Mistakes of Packaging Line Design & Integration**.
- We focus on creating packaged goods production lines that consistently deliver optimum rates of machine availability and maximized Overall Equipment Effectiveness (OEE).
- We understand that when it comes to new packaging lines, preventing problems is much less expensive than solving them.
- Our project teams routinely use proprietary validated packaging line design tools that eliminate the guesswork, opinions, conventional wisdom and other subjective approaches from the planning and designing process.
- We execute every project with multi-disciplinary teams to assure thorough and effective project execution.

AVOIDING THE 5 DEADLY MISTAKES OF PACKAGING LINE DESIGN & INTEGRATION

ZARPAC is known in the industry for designing, integrating, optimizing, installing, commissioning and handing-off packaging lines that run at promised Overall Equipment Effectiveness (OEE) targets.

We do that by preventing the problems that other packaging line designers and integrators unintentionally build-in to their lines.

Our approach is focused on helping customers optimize line OEE by avoiding the **5 Deadly Mistakes of Packaging Line Design and Integration**.

The impacts of these **5 Deadly Mistakes** are easy to understand but preventing them requires deep packaging equipment and packaging line design and implementation expertise.

Our understanding of these mistakes and their costly impacts has been derived in part by the hundreds of "clean up this mess" packaging line projects we have been retained to fix. Our team has completed several hundred such projects over the last thirty years and each one has enhanced our understanding of what works, and what doesn't.

Here Are the **5 Deadly Mistakes of Packaging Line Design and Integration**

1. Incorrect machine placement
2. Incorrect steady state and surge machine speeds
3. Incorrect accumulation design and capacity
4. Ignoring conveyor system integration
5. Ignoring product, primary packaging and secondary packaging characteristics

Just one of these deadly mistakes can cost millions \$\$\$ in downtime, lost production by below target production speeds and reduced productivity.

When you begin evaluating potential suppliers for your next packaging line project, we encourage you to ask them about how they will guarantee you will not have to live with the downtime and lost productivity caused by these deadly mistakes.

PREVENTING PROBLEMS IS FAR LESS COSTLY THAN FIXING THEM

Validated, experience-based packaging line design tools set ZARPAC apart from other companies offering packaging line design, integration and controls programming services.

Packaging line design and OEE optimization is a science, not an art, and our proprietary formula-based tools deliver accurate, consistent and on-target results.

ZARPAC has developed, used and validated real world-based tools to precisely calculate right-sizing for optimum machine speeds, optimum machine placements, optimum conveyor speeds, and optimum accumulation capacities.

Our proprietary tools replace the guess work, the opinions and the conventional wisdom used by other suppliers with validated formula-based tools that convert production line requirement inputs into practical design criteria.

Experience has taught us and our repeat customers that numbers, when used correctly, never lie.

Why do we use packaging line design tools?

- They guarantee we prevent the **5 Deadly Mistakes of Packaging Line Design and Integration**
- Validated accuracy
- Consistency
- Objective, not subjective
- It's all about the numbers: inputs – formulae – outputs
- And, they work!!!

ZARPAC's portfolio of packaging line design tools include:

Packaging Line OEE Optimization Model

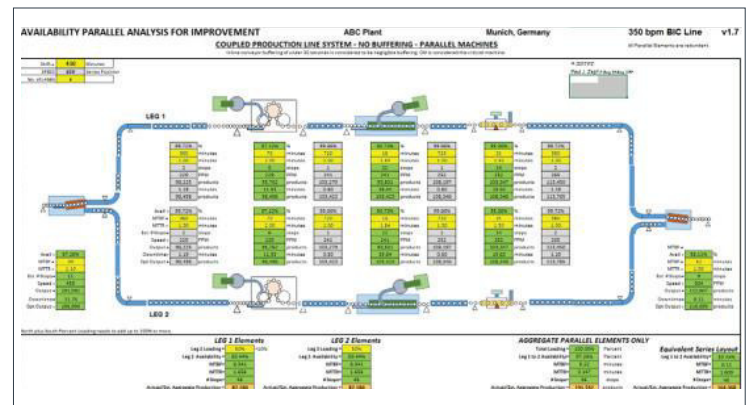
Quantitative tool whose outputs ensure that a specific line design and layout does not negatively impact OEE. Goal is machine downtime is only source of negative OEE impacts.

OEE Optimized Machine Speed Calculator

Quantitative tool whose outputs specify the optimum operating and surge speeds for each machine in the production line. This tool helps define appropriate machine models and target steady-state speeds for each machine in the line.

OEE Optimized Accumulation Sizing Calculator

Quantitative tool whose outputs specify the optimum location and sizing for accumulation in the production line.



Validated ZARPAC Design Tools Help Production Lines Deliver Optimized OEE Performance