

Process and Energy Optimization

Proven approach to improving operation efficiency

Improving production efficiency and reducing costs is the goal of every business. However, it isn't always easy to identify and ultimately correct the things that are preventing you from achieving those goals. Plus, with your staff already busy with their full workload, it can be challenging to find internal resources to accomplish these objectives.

This is where Plastic Technologies, Inc. (PTI) can help. For the past 30 years, we have been assisting both brand owners and converters to optimize injection and blow molding processes for preform and plastic container manufacturing. We also excel in improving plant operating efficiencies. *(For a list of services please see the next page.)*

Our **Process and Energy Optimization** approach results in reduced costs, improved output, enhanced product quality and lower waste. In fact, in some instances, we've been able to reduce costs by more than \$1 million, while also improving quality and output. Bottom line, the goal is to produce enough air to blow bottles and no more.

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Cost savings opportunities:

Filler/blow molder synchronization. Potential energy savings associated with correct machine setup and process can be as much as \$170,000 per machine.

Processing and start up procedures. By reducing waste at start up, energy cost savings between \$12,000 and \$24,000 dollars a year per machine (based on 8 to 16 restarts an hour) are possible.

Refining the process. Depending on the base-line process and oven condition originally established, another \$5,000 to \$10,000 a month in energy savings can be achieved. Reducing air usage can result in additional savings that could be up to twice the amount experienced with process modifications.



Actual client scenarios:

Millions of parts produced with a premium resin were rejected by the customer jeopardizing future business. PTI was able to solve the problem, by improving the process and reducing costs.

A plant installed a new line to produce eight different bottles. Line efficiency was at 41% which caused plant efficiency to be at 68.7%. At the end of the project, plant efficiency was increased to 83.2%. Quality complaints were also reduced.

A brand owner was experiencing bottle expansion. Performance was improved to meet plant standards. Labeling problems were minimized because the bottles expansion was reduced. Package performance improvement enabled a 15% line efficiency increase and reduced lost label scrap by 2% or more.

Significant cost reductions,
with one client reporting
\$500,000 in savings.

Here are some of the services we provide:

Audits

- Energy usage (power, air, water)
- Material handling

Trials (onsite support)

- Resin
- Color
- Filling line
- New package design and optimization

Studies and evaluations

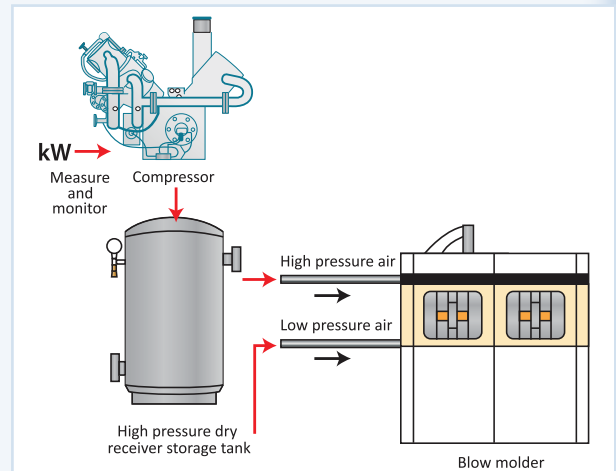
- Equipment selection
- Drier studies
- Auxiliary equipment

Machine and plant startup

- Preform injection molding
- Machine acceptance and installation
- Bottle blow molding

Quality programs

- Evaluation and effectiveness
- Problem investigations
- Stress crack failures



Please contact us today for a no obligation discussion of your specific situation and how our experts can apply PTI's **Process and Energy Optimization** analysis to improve your operation.

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