

Energy Audit Service

Reducing consumption, improving efficiency.

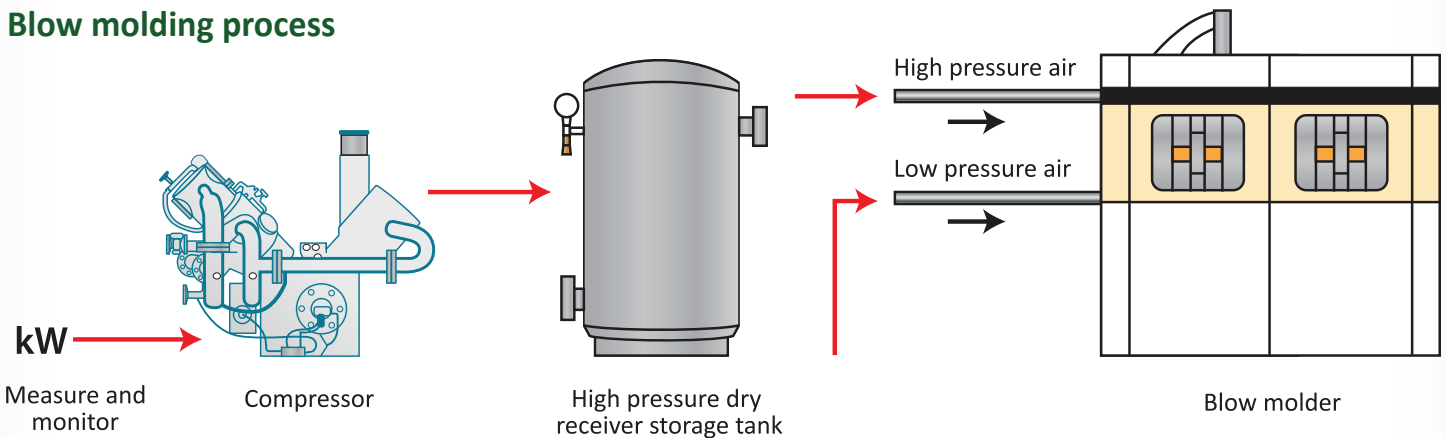
Reheat stretch blow molding equipment AND compressed air systems require a significant amount of energy to produce containers. Creating an efficient blow molding process, maintaining the compressed air system implementing a robust monitoring scheme results in significant energy cost reduction. Addressing energy consumption in this unique dual focus scheme has resulted in significant economic results.

Program benefits:

- Identifies energy improvements while providing significant cost savings.
- Create optimized, repeatable and sustainable blow molding processes that use less energy.
- Reduce scfm/kW, pressure, pressure drop and dew point within the air system.
- Balance the demands of the compressor room and the blow molding area.
- Reduce the peak usage which result in a dramatic effect on energy cost containment.



Blow molding process



Plastic Technologies, Inc., (PTI) Holland, OH, and Air Power USA Inc., Baltimore, OH, have partnered to create a unique energy audit program. A program specifically designed to address the blow molding process and compressed air requirements collectively which leads to lower energy cost. Decades of experience and extensive working knowledge in these fields is unmatched by this collaborative team.



✓ **Allow our Energy Audit Service to inspect, analyze and develop a plan that will quickly return your investment. Let our proven record of success do the same for you.**

✓ **Our expertise and knowledge of specific state energy initiatives may even allow you to fund this effort. Please ask us about your specific state or regional program availability of energy rebates.**



For more information contact:

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Our review and process steps to minimize energy usage

- A. Opportunities identified
- B. On-site inspection with collection of specific data
- C. Defining and assessing of the cost savings determined
- D. Summary report with a plan and associated costs
- E. Return on investment for each component of the plan
- F. Recommend longer term capital projects with their own payback
- G. Evaluation of potential utility incentives

Case Study #1 North America CSD in-line blow fill operation.

4 - blow molders, 11 - unique packages produced, 3 - 1,730 ascfm compressors operating.

Project effort included:

- Defined heating oven maintenance and adjustment program
- Evaluated and optimized all air components
- Optimized blow molding operation
- Identified serious restriction to maximum air flow
- Improved compressor controls to blow molder
- Matched compressor operation to blowing needs – use of 2 versus 3 systems
- Balanced the use of high pressure and low pressure systems

Results: The average kW savings DURING production:

Electrical rate per kW :	kW for BM and compressors in operation	Est. annual production hours	Est. annual savings	Total capital and expenses	Payback on project expense
\$0.11	694	8,000	\$500,000	\$ 850,000	20 months

Case Study #2 Southeastern USA, CSD in-line blow fill operation.

4 - blow molders, 9 - unique packages operating and 2 - compressors.

Project effort included:

- Defined maintenance program for infrared heating system
- Evaluated and optimized all air components
- Isolated one specific low volume production item
- Optimized blow molding operation
- Improved compressor controls to blow molder
- Matched compressor operation to blowing needs
- Balanced the use of high pressure and low pressure systems

Results: The average kW savings DURING production:

Electrical rate per kW :	kW for BM and compressors in operation	Est. annual production hours	Est. annual savings	Total capital and expenses	Payback on project expense
\$0.09	72	8,000	\$ 179,000	\$ 200,000	13 months



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