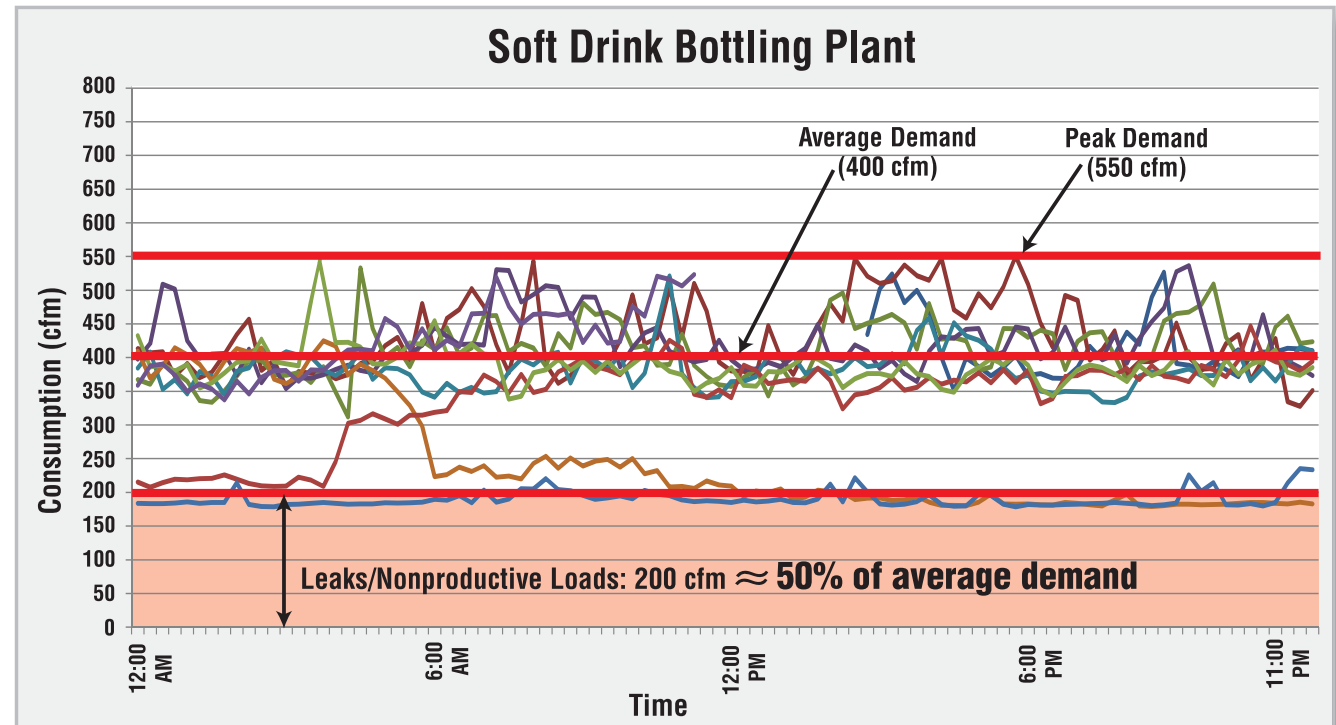# All plants have air leaks

The US Department of Energy estimates that an average of 25% of compressed air is lost to leaks — resulting in unnecessarily high operating costs. In many plants the leak losses are much higher.

In this soft drink bottling plant, approximately half of the average consumption is lost to air leaks. With the local industrial electricity rate of $0.13/kW·h, this constant demand may cost as much as **$34,000** per year in electricity.

Soft Drink Bottling Plant

Average Demand (400 cfm)
Peak Demand (550 cfm)

Consumption (cfm)

Leaks/Nonproductive Loads: 200 cfm ≈ **50% of average demand**

Time

The graph above is an actual flow study. Each trend line tracks a 24 hour period in a 10-day Air Demand Analysis. Leak costs were based on the local electric rate, 8760 annual operating hours, and compressor output of 4.5 cfm per hp and motor efficiency of 93%.

Ready to fix your leaks?
Kaeser can help.

Our leak detection and repair program is a smart solution for facilities that are ready to stop wasting energy. The cost to identify and fix leaks is far less than the cost of wasted energy.

Kaeser uses the latest generation in ultrasonic leak detectors with onboard data logging. In addition to tagging your leaks, you will receive a detailed report with the location and approximate leak rate of each leak found. With this information, you can determine the best leak repair plan.

Sample Return on Investment

Average demand	450 cfm
System horsepower	100 hp
Industry average leak rate	25%
Leak energy cost (for 25 hp)	$12,300*
Fee to find and tag leaks	$1200/day
Cost to fix 1/3 of leaks identified (labor and materials)	$800
Total Costs	$2000
Annual electrical savings	$4100
Net Savings	**$2100 in first year**

Based on full time operation, 93% motor efficiency, and $0.07/kW·h (US average)

Additional benefits of leak reduction:

- more stable system pressure and better functioning equipment
- less leakage means less compressor run time
- increased service life and decreased maintenance requirements
- additional capacity available for surges in production and growth
- lower carbon footprint
- **increased profits**