

Capitalize on energy savings potential

Arguably the cheapest and fastest way to reduce the carbon footprint in industrial compressed air systems is to reduce leakage.

Summary:

Because energy is the largest controllable operating expense for organizations using industrial compressed air systems, reducing energy costs has a significant positive impact on the bottom line.

A properly managed compressed air system can:

- save energy,
- decrease downtime,
- increase production throughput, and
- improve product quality.

Reduce leakage

A leakage repair project represents the fastest return on investment (ROI) in compressed air system projects. According to industry data, the typical ROI for compressed air system retrofits is 1-2 years. However, the 7,000 leakage management projects that Energize have completed demonstrate that ROI can be as low as 3-9 months.

Leakage repair is also the fastest way to reduce energy consumption and thereby your company's carbon footprint.

System analysis with a view to optimize the compressed air system

During the compressed air system analysis, the Energize solution supports people in their work to baseline the system. Energize provide all the tools needed to measure power, pressure and dew point under different operating conditions, as well as a calculated flow and estimating leak load.

This means that organizations can establish current energy performance levels and costs of the compressed air system and compare the results with the facility's present production levels. The Software-as-a-Service suite in combination with mobile loggers provides comprehensive support for organizations to capture all data in the process.

The savings potential for compressed air systems can be broken into four areas:

1. Compressed air generation – including compressor efficiency and compressor control.
2. Compressed air treatment – including operation of dryers and filters, and pressure losses across treatment.
3. Distribution system – including pressure losses and zone isolation.
4. Use of compressed air – including artificial demand, inappropriate use and leakage.

Stay laser focused on optimization

Continuous optimization of the industrial compressed air system is an integral part of the strategy for many of the plants Enersize works with. Here's what some of the customers are saying:

Data-driven leakage management at Ringnes brewery

Ringnes AS is the leading beverage brand in Norway. The brewery, which employs 900 people and covers an area of 77 000m³, produces beer and soft drinks. The facility is fitted with two separate compressed air systems. These supply approx. 40m³/min and support both the production lines and logistics facility. Ringnes is part of the Carlsberg Group.

The introduction of a global sustainability agenda for the Carlsberg Group has influenced the direction for Ringnes when it comes to energy savings and the focus on cutting carbon emissions. "The introduction of the ZERO carbon footprint agenda changed the mindset around utilities like compressed air," explains Marius Fagernes, Project Manager at Ringnes.

Ringnes is also looking at their compressor capacity. "If we can better align our compressor capacity to our compressed air demand, we see a huge potential for further energy cost savings. It is important to [continuously optimize the compressed air system](#) to meet the changing needs in the production line," says Fagernes. "We would never have reached this point where we are actively evaluating our compressor capacity, if we didn't have the right data. This is where Enersize has helped us enormously," concludes Marius Fagernes.

Protan increases asset uptime by optimizing compressed air system with Enersize data

At Protan AS, Drammen, the risk of failure of the machines is kept as low as possible with a continuous focus on preventive maintenance. The objective is to ensure that the availability of the machines is not restricted which requires addressing both the supply and demand sides of the system and how the two interact in terms of flow and power.

Protan is a Norwegian industry group that is a world leader in membrane technology. The firm develops and supplies membranes, roof systems, ventilation systems and technical textiles. At the 5,000 m² Protan facility in Drammen the compressed air system is divided into low and high pressure nets with primary compressor capacity at 7 m³/min.

Tom Lillemoen, Technical Manager at Protan AS in Drammen, estimates that the facility is seeing considerable year-on-year cost savings due to the continuous focus on maintenance.

Lillemoen elaborates: "It is my estimate that Protan AS Drammen, has increased machine uptime and availability by 10 to 15 percent with proper maintenance, of which 2 to 3 percent can be directly attributed to the effective leakage management in the industrial compressed air system."

Ringnes facts and figures:

- 44% reduction in leakage level documented by leakage detection survey.
- 450,000kWh Energy savings attributed directly to the first year of the leakage repair project.
- 100,000kWh An estimated year-on-year cost avoidance equivalent to 100,000kWh due to continuous leakage management.

Protan facts and figures:

- 2-3% increase in equipment uptime and availability from leakage management.
- 200-300t NOK energy savings on an annual basis from optimal maintenance.
- the purchase of one new compressor was avoided.

And he continues: "I recommend partnering with a professional auditor who can analyse the data from the audit and survey, and who can also advise how best to prioritize repairs and conduct preventive maintenance so that you know exactly which spare parts to retrofit. This way you can [optimize machine uptime and availability](#). After all, without compressed air production stops," concludes Tom Lillemoen.

How to get started with optimization?

With Enersize's unique energy excellence model, you get instant insights based on data measurements that document your compressed air system status and your actual energy cost and carbon emissions.

A system analysis is the starting point for plants looking for sustainable energy optimization of their compressed air system.

Decide your next step.

The overall findings from the compressed air system analysis are collated and presented in a final system analysis report which includes an action plan and a number of suggestions for improvements. Then it is time to decide on next steps.

About Enersize

Enersize delivers smart software, tools and services for energy optimization of industrial compressed air. Resulting from the merger of three Nordic companies, Enersize customers benefit from the heritage and experience of over 7000 projects. Our expertise and the commitment of our people has made us a recognized global leader in compressed air efficiency software. The company is listed on Nasdaq Stockholm First North Growth Market under the ticker: ENERS

**For more information visit
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