


**IMPORTANT
INFORMATION!**

Based on
£0.1249/kWh

Energy costs are increasing
and savings will now be
significantly higher. Please
refer to your electricity
unit charge.

bcas
TASKFORCE

Did you know that reducing air leaks in your compressed air system is the single most important energy saving measure you can take?

All compressed air systems have leaks. But in the past, these leaks have been ignored, since they pose no immediate health and safety hazard. Just one 2mm hole in your pipework, could cost over **£1,249** per year in wasted energy.

So, it's well worth acting now. A high leak rate causes fluctuations in pressure, resulting in hidden costs such as slower running or even production downtime, not to mention a noisy environment for staff. Our simple guide takes you through some of the main areas to consider as part of your compressed air energy reduction programme.

Which areas should I look out for?

Common leakage sources are:

- Air-using equipment left running when not needed
- Manual condensate drain valves left open
- Leaking hoses and couplings
- Leaking pipes and pipe joints

The 10% Taskforce!

Join our campaign to cut compressed air energy wastage and take the equivalent of **317 thousand cars off the road**, saving UK business over **£147.5 million**.

Visit the **BCAS 10% Taskforce website** below and share your energy saving tips. Working together, we can cut our carbon footprint from compressed air for a brighter future!

 **bcas**
BRITISH COMPRESSED AIR SOCIETY

Your guide to reducing leaks

1 Under pressure



A pressure drop in the system means that the generating pressure is set much higher than is necessary.

Start by identifying why there is a pressure drop and take action. It may be due to:

- Leaks
- System component constrictions (e.g. valves, bends)
- Undersized piping
- Pipework installation (e.g. no ring main)

2 Identify and measure



Conduct an out of hours survey and walk the site listening for leaks. Then, implement a leak management programme:

- Tag the leaks and record on a site plan
- Grade the priorities - and fix the largest leaks first
- Encourage users to report leaks and repair as soon as possible

3 Stop the drop



Once you have repaired the leaks, speak to your supplier about reducing the generation pressure at the compressor (understanding the system pressure is critical).

Otherwise, fixing leaks will increase the pressure and not only impact on your system but also put at risk your projected savings.

- The pressure drop should be less than 10% of the compressor's discharge pressure, as measured from the compressor outlet to the point of use

More info

For more compressed air energy savings tips and advice, visit www.taskforce10.bcas.org.uk

- If one section of the plant requires a much lower pressure, then it may be better to run a dedicated low-pressure compressor or to regulate the pressure down for that line
- On average, it is found that for every 1 bar g additional generation pressure there is a loss of 7% in specific energy therefore keeping pressure losses low helps reduce operating costs

4 Zone out



Save energy with good pipework design.

- Split the system into zones and pressurise each as required
- Remove or isolate redundant piping
- Use vales to isolate parts of the distribution network
- Select large radius bends instead of elbows
- Support piping to minimise movement and sagging to reduce leaks and build-up of fluids

Top tips

- Don't generate at a higher pressure than necessary
- Measure the pressure drop across the system
- Not all parts of the network operate to the same hours or pressure, so save energy by zoning the compressed air system
- Leaks need to be monitored constantly. Carry out a leak survey at least twice a year

Remember!

- If you are planning to purchase equipment to save energy, ensure you compare alternatives based on whole life cost, not just the initial capital outlay
- If you buy less efficient equipment at the outset to save money, you will be locked into higher running costs for the long term