

TOOLBOX

Keep compressors on a low pressure
and don't overuse

Did you know?

- Air is free... until it is compressed! Compressed air is the most expensive essential utility on a site, costing more than electricity, water or gas.
- The compressing process is inefficient – it takes over 10 units of electricity to provide 1 unit of compressed air; 90% is lost as waste heat (but you could use it for heating).
- Idling compressors consume 20–70% of their full load power and one small leak costs over £500 a year.
- You can save up to 30% of the energy used in air compressors by using them less, maintaining them diligently, and controlling how they are used.



Take action to save energy...

1

Reduce compressor use:

- Find out the annual cost of compressed air at your site.
- Minimise use of compressed air where possible.
- Consider alternatives to compressed air or install a smaller compressor unit.

2

Maintain compressors diligently:

- Identify and report compressed air leaks and try to fix as many as possible.
- Leaks reappear so implement a schedule for checking, reporting and fixing them.
- Replace clogged filters.

3

Control compressors carefully:

- Switch them off as soon as possible and switch them on no earlier than necessary.
- Reduce the system pressure to the minimum required.
- Divert air intake to draw air at the lowest possible temperature or from the nearest outdoor point.
- Divert waste heat from the compressor cooling air to outside the compressor house, or to where heat is required if possible.



Take action and here's what you save:

- For every 0.5 bar reduction in pressure, the compressor uses up to 4% less energy.
- A 10% reduction in air inlet temperature improves efficiency by about 3%.
- Installing variable speed drives on idling compressors can save between 20% and 70% of their full load power.
- Recovering and using waste heat – up to 90% of it – will save on heating bills.



Add your actions to your site's energy saving plan and start counting the savings.