

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.


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TASKFORCE

Typically, only 10% of the electrical energy input to an air compressor is converted into compressed air energy. The remaining 90% is normally generated as heat and is generally lost to the atmosphere through heat dissipated by the motor and cooling system, with the majority lost via the system's oil cooler.

However, there is a real opportunity for operators to recycle this excess heat and use it to a site's advantage. Compressors fitted with a heat recovery unit enable the system to 'recapture' energy lost during the compression process and put it to other useful purposes.

For instance, it can supplement the electricity, gas or oil needed to generate hot water for washrooms or process water, or it can be transferred as direct warm air into a workspace or facility.

Heat recovery units can be specified on new compressors but also in many cases fitted to your existing equipment as a retrofit accessory. Please speak to a BCAS member to understand the application of heat recovery with your specific site conditions and heat requirements.

Another crucial benefit to heat recovery for environmentally conscious business is that the recycling of heat will help reduce a site's CO₂ emissions too. Read on to discover more about how to take advantage of heat recovery for your operations.

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!


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 BRITISH COMPRESSED AIR SOCIETY

Warming up to heat recovery

There are a range of heat recovery options available that can help you save energy, depending on your needs and requirements.

1 Air-cooled systems



Conventional in small and medium compressor systems, air-cooled models cool compressed air using a lower pressure air stream.

This warmed air can then be used to heat buildings and workspaces. By reducing your dependence on external fuel sources, this can help you save money and energy.

However, it's important to bear in mind that savings can only be realised in the colder months of the year.

2 Oil-cooled systems



These use a flow of oil to remove heat from the compressed air. In a closed system, the oil can be routed back into the manufacturing process.

Heat is transferred into the manufacturing process via a heat exchanger, which reduces the need for either electric or gas heating.

3 Water-cooled systems



These can be open or closed, circulating or non-circulating. The most beneficial is a closed-loop system with circulating water.

In this case, water circulates between the air compressor cooler and a process heat exchanger. By transferring excess compressor heat to the manufacturing process, this reduces the need for external heating.

Significant savings



Whether you choose an air-cooled, oil-cooled or water-cooled heat recovery system, all options reduce the need for purchasing energy.

This leads to lower CO₂ emissions and operating costs, helping you to meet carbon reduction targets and improve profitability levels.

Hot air

Beware claims that 90% of energy wasted as heat is recoverable.



It's possible to recover some of this heat and use it elsewhere, but heat output is highly dependent on the load cycle of the compressor being able to generate sufficient heat at the right times.

More info

For more compressed air energy savings tips and advice, visit

www.taskforce10.bcas.org.uk