

Heat Recovery Systems

Technical Information Bulletin - #9

This technical bulletin is designed to provide more information about heat recovery systems, including how they can improve energy efficiencies and significantly reduce operating costs by reusing the excess heat generated by your compressed air system.

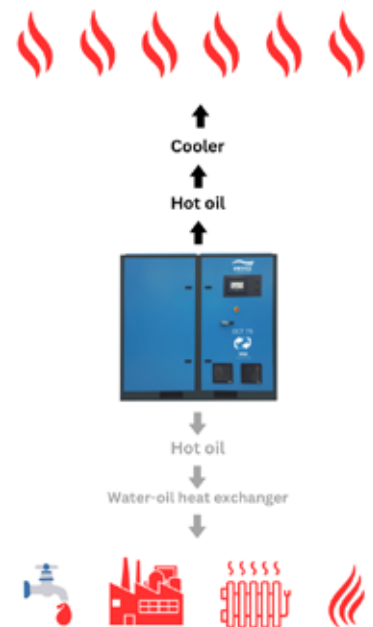
Heat recovery systems are designed to capture and reuse the excess heat generated by your compressed air system during the air compression process.

Air compressors, especially larger industrial models, can produce significant heat as a byproduct of compressing air, and without a heat recovery system, this energy is typically wasted.

What is a compressed air heat recovery system?

A heat recovery system captures the waste heat from your compressed air system and redirects it to other areas of your business, offsetting energy consumption in these areas. This could include heating water or air on site, channelling the heat into other areas of your production process, using it as part of the heating of your business space or for hot air blasts.

By installing an after-market heat exchanger, which is installed by our compressed air technicians, you can save up to 85 percent of the heat generated by your compressed air system.



How do heat recovery systems work?

In simple terms, as air is compressed in your system, the temperature of the air and the compressor components rises. By using a heat recovery system, this heat can be converted into heat that can be recovered and used for other processes.

A part of the heat recovery system, a water/oil heat exchanger (pictured left) uses the thermal energy emitted by your compressed air system to produce hot water for heating, industrial or sanitary use.

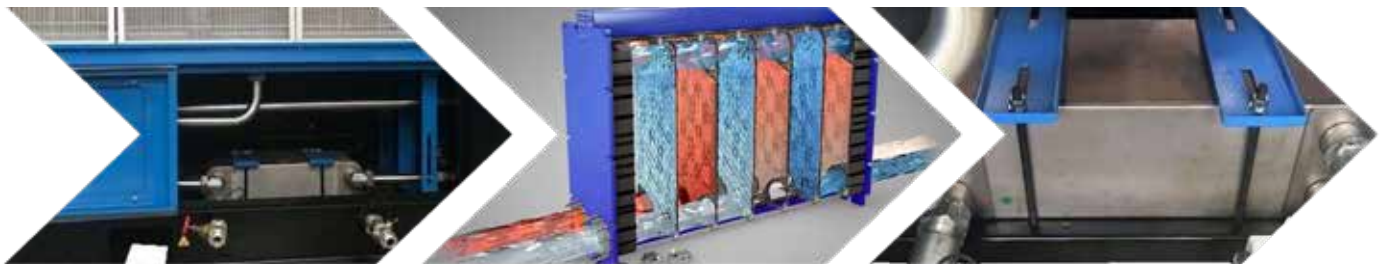
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How is a heat recovery system installed?

Heat recovery systems can be installed by our compressed air technicians as an aftermarket compressor accessory, similar to installing a dryer.

The initial investment in a heat recovery system is quickly offset by the long-term financial benefits, making heat recovery a very sensible investment option for many industries.



Benefits of heat recovery systems

There are significant economic and environmental benefits to be gained from installing a heat recovery system, including:

- 1. Energy savings:** The most direct benefit of installing a heat recovery system is the reduction in energy consumption. By using recovered heat for heating needs within your business, you can reduce the need for additional energy sources such as gas or electricity.
- 2. Cost reduction:** Reduced energy consumption results in lower operational costs – specifically electricity and gas. Depending on the size of your compressed air system and the extent to which recovered heat is reused, you could benefit from a significant reduction in energy costs.
- 3. Improved efficiency:** Capturing heat and repurposing it increases the overall efficiency of your compressed air system, maximising the return on investment for capital equipment.
- 4. Enhanced equipment lifespan:** By improving cooling and reducing the overall strain on your compressed air system, heat recovery can help extend the life of compressors and related equipment, leading to reduced maintenance costs and downtime.
- 5. Reduced carbon footprint:** Heat recovery systems support your businesses to reduce its carbon emissions by using less external energy.

More information

If you would like to find out more about heat recovery systems and the savings to be gained from installing one as part of your compressed air system, contact our compressed air specialists on 1300 290 638 or email info@nesscopressure.com.au.

