




Atlas Copco



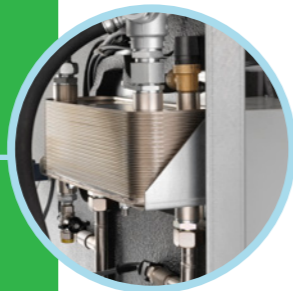
Energy recovery for GA oil-injected screw compressors

Innovating for a sustainable future

At Atlas Copco, we have always looked ahead. Which products and services will make our customers more successful? Your future drives the Atlas Copco team every day. It is the reason why we devote so much time and so many resources to innovation. If there are technologies that will advance your productivity, we will find them. That is what we have been doing for more than 150 years now, setting new standards in compressed air reliability, efficiency, connectivity, and sustainability.

It's that last principle that now comes first. Sustainability is no longer something we should strive for, but something we must achieve. Productivity and growth will have to be built on sustainability. Atlas Copco – our products, our services, and our people – will help you get there, as we always have.

The technology that drives energy efficiency



Heat exchanger

The oil/water heat exchanger that allows you to capture your oil-injected screw compressor's waste heat and re-use it as hot water.



Hot water storage

Store your recovered hot water for 24 hours and use it when you need it. 400- and 800-liter vessels are available.



Elektronikon® controller

Use the advanced Elektronikon controller to monitor and optimize your oil-injected screw compressor's energy efficiency and recovery.

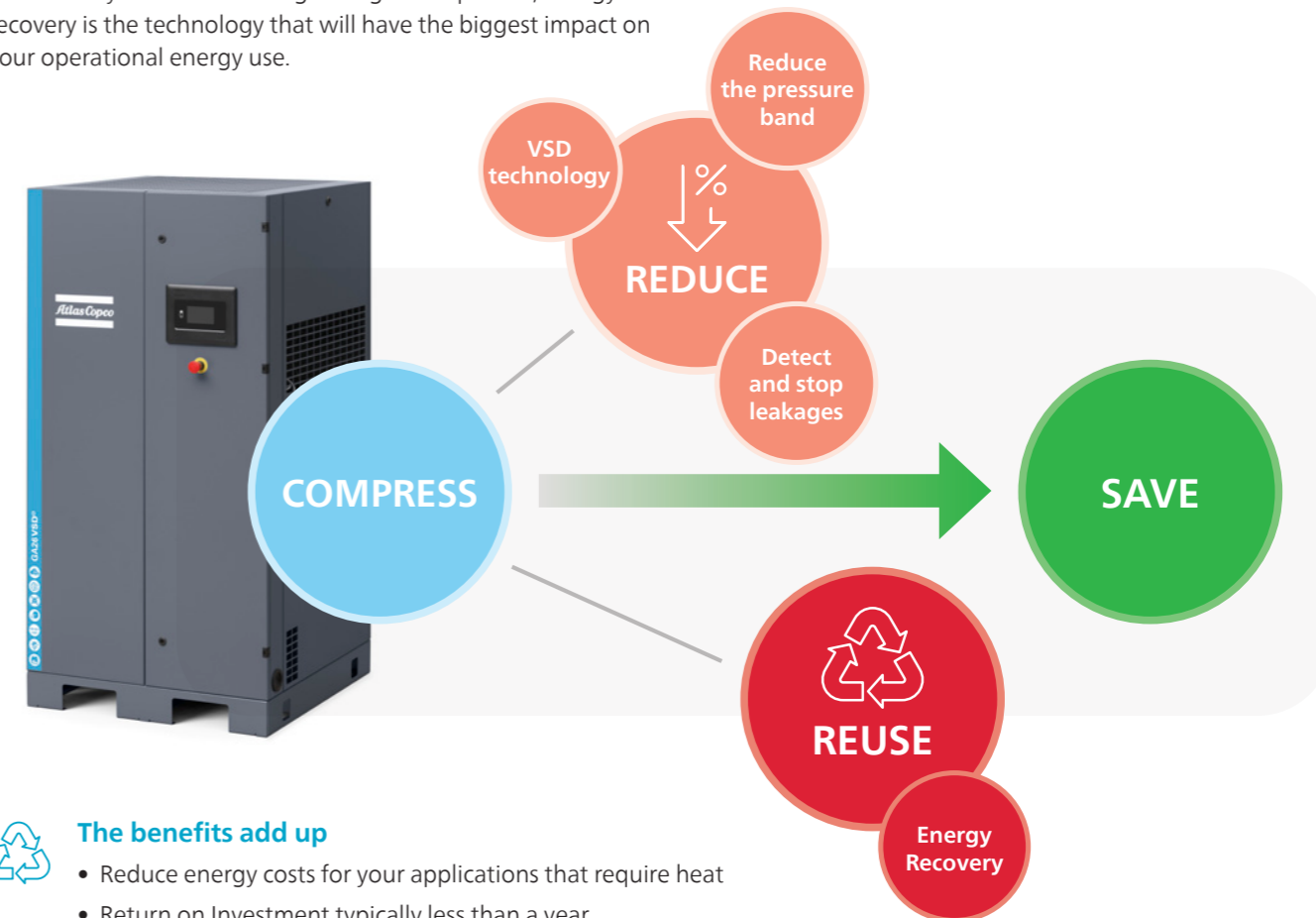
Use your compressor energy twice



Compressing air generates a lot of heat. In fact, most of the electrical energy that goes into a compressor is converted into heat. Without energy recovery, this heat gets dissipated back into the environment. Energy recovery technology captures up to 94% of this waste heat as hot water air or hot air and lets you re-use it for applications that need it anyway, like HVAC systems or industrial processes. That means you get to use your compressor's energy twice. At a time when energy efficiency has become a top priority, compressor heat recovery is one of the most significant means to lower your operations' energy use as well as your carbon footprint.

Meet your financial and sustainability goals

Over the lifetime of a compressor, energy makes up about 80% of its total cost of ownership. That is why using a highly efficient model is key. Next to choosing the right compressor, energy recovery is the technology that will have the biggest impact on your operational energy use.



The benefits add up

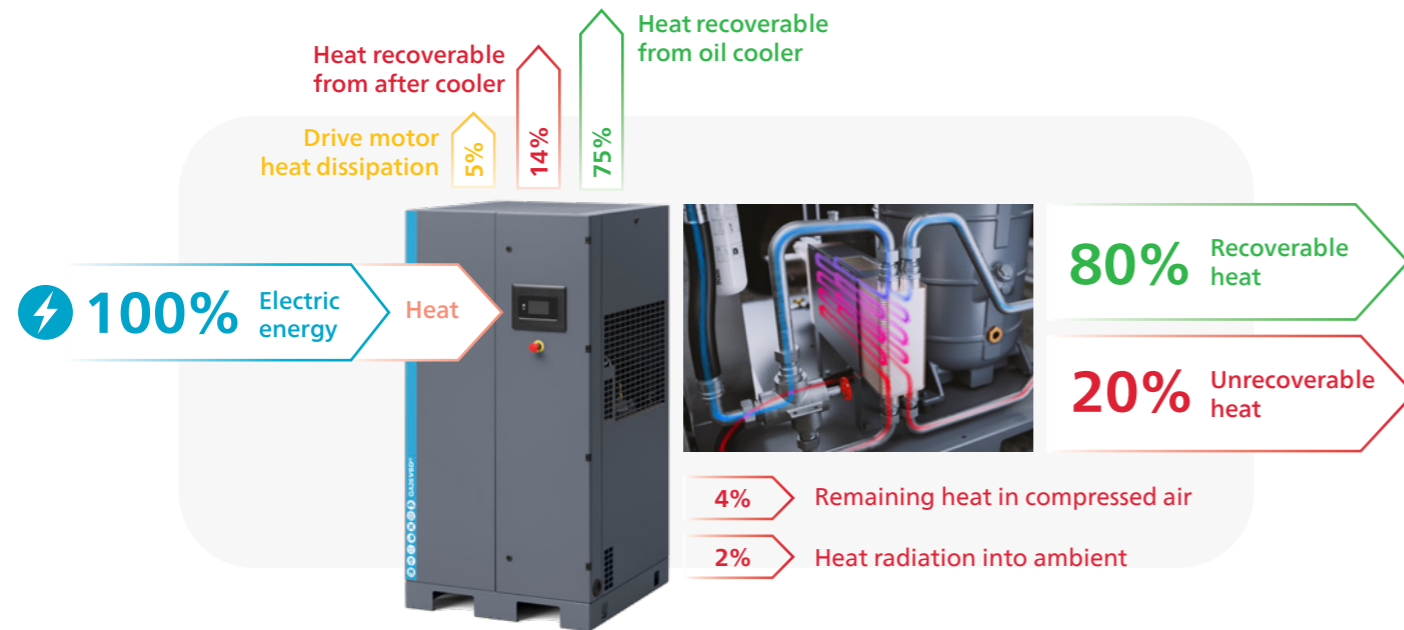
- Reduce energy costs for your applications that require heat
- Return on Investment typically less than a year
- Turnkey solution
- Minimal installation costs and no additional space requirements
- Limited piping
- Central monitoring via Elektronikon controller

Hot water recovery

Recover up to 80% of your oil-injected screw compressor's waste heat as hot water and re-use it somewhere else as hot water or steam.

How it works

The compression process generates a lot of heat in the drivetrain. In oil-injected compressors, this heat is captured by the oil, which is then cooled in the oil cooler. With Atlas Copco energy recovery technology, the hot oil is redirected from the drivetrain to a heat exchanger. In this heat exchanger, the heat is efficiently transferred to a water supply connected to the compressor. You now have water with a temperature of up to 95 degrees Celsius ready for use somewhere else.



Applications

- Feed water preheating
- Space heating
- Process heating (eg. cleaning in place, bottle washing)
- Generating cold water
- Selling waste heat to neighboring companies or to a district heating system.

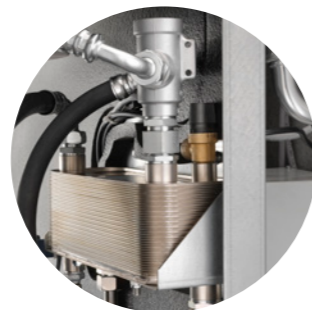
Multiple uses

Steam and hot water are used in countless industries, often in multiple, continuous processes. For these applications, recovered hot water can contribute to operational energy efficiency.



Completely integrated

To save on floor space, the Atlas Copco hot water recovery kits are completely integrated into your new or existing Atlas Copco oil-injected screw compressor. The kits include an oil/water heat exchanger, a thermostatic bypass valve, two temperature sensors for water inlet and outlet control, and any necessary accessories.



Intelligence is part of the package

With the Elektronikon Touch, you enjoy central control and monitoring of your compressor's energy efficiency and recovery:

- High-resolution color display gives you an easy-to-understand readout of the equipment's running conditions.
- Fast access to all of the important settings and data.
- Monitoring of the equipment running conditions and maintenance status with real-time alerts when needed.
- **SMARTLINK** remote control and control.



Hot air recovery

Your oil-injected screw compressor's waste heat can also be re-used as hot air. You can capture up to 94% of this waste heat and duct it out for drying and heating applications.

Applications

- Auxiliary or main space heating of warehouses and workshops
- Air curtains
- Dryers (eg. for painting or washing processes)
- Curing equipment
- Pre-heating of combustion air to increase efficiency of oil burners



Thermo kit

The Atlas Copco Thermo Kit is the easy, all-in-one energy recovery and storage solution. It captures the waste heat of your compressor as hot water and stores it in a buffer vessel until you need it. Thermo Kit is often used for central heating, but it can also be employed in other closed loop hot water systems.

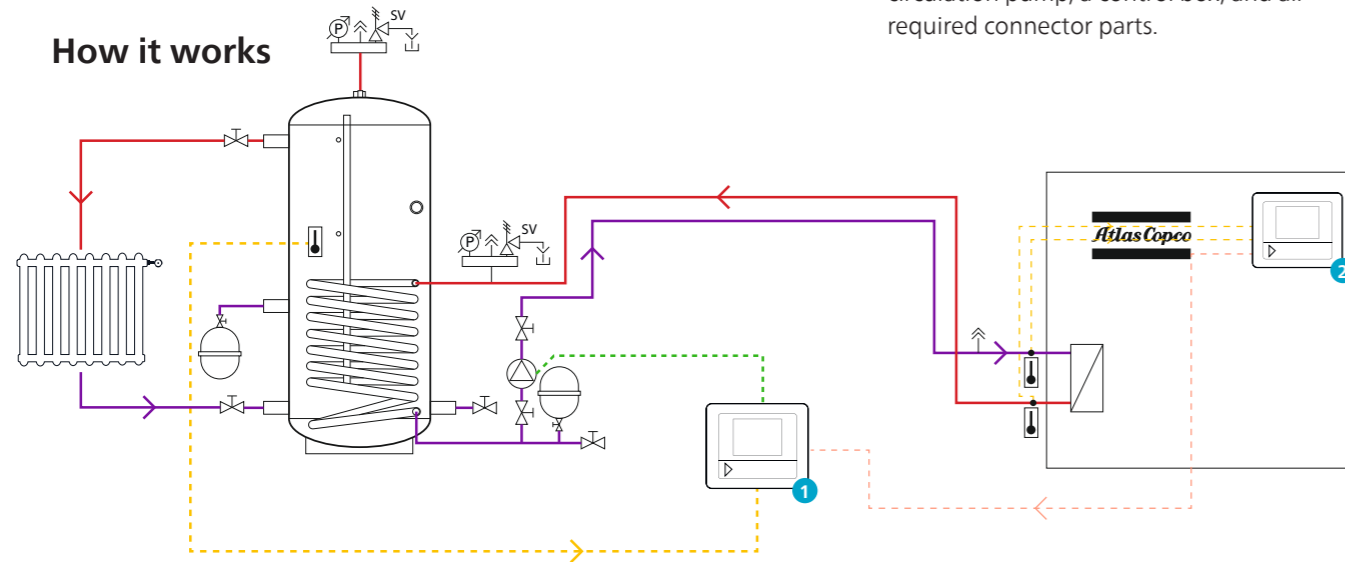
All-in-one hot water recovery & storage

- Highly efficient energy recovery
- 24 hours of hot water storage
- ± 1 hour of heat supply
- Extra safety built in to eliminate risk of water contamination
- Easy, quick installation requires no engineering
- Hot water temperature controlled by Elektronikon

Easy installation

Thermo Kit includes a buffer vessel, a circulation pump, a control box, and all required connector parts.

How it works



- 1 Central heating kit controller
- 2 Compressor controller
- Cold water
- Warm water
- CAN connection between controllers (1) and (2)
- Temperature measurement
- Temperature sensor

A choice of buffer vessels

To meet your specific needs, Thermo Kit is available with two vessel sizes, 400 and 800 liters. The vessels can be used with Atlas Copco GA oil-injected screw compressors that offer the Energy Recovery option. Your Atlas Copco representative can help you determine which vessel type will work best for you.

Technical specifications

| Compressor size | Installed motor power | | Recoverable power/energy* | | Water flow** (ΔT = 10K) | | Water flow** (ΔT = 50K) | |
|-----------------|-----------------------|-----|---------------------------|-------|-------------------------|------|-------------------------|-----|
| | kW | Hp | kW | Hp | l/min | GPM | l/min | GPM |
| 5.5 | 5.5 | 7.5 | 5.5 | 7.4 | 6.5 | 1.7 | 1.6 | 0.4 |
| 7.5 | 7.5 | 10 | 7 | 9.4 | 10.2 | 2.7 | 2.0 | 0.5 |
| 11 | 11 | 15 | 10.3 | 13.8 | 14.8 | 3.9 | 2.9 | 0.8 |
| 15 | 15 | 20 | 14.4 | 19.3 | 19.4 | 5.1 | 4.1 | 1.1 |
| 18 | 18 | 25 | 18.2 | 24.4 | 26.2 | 6.9 | 5.2 | 1.4 |
| 22 | 22 | 30 | 20.9 | 28.0 | 29.9 | 7.9 | 6.0 | 1.6 |
| 26 | 26 | 35 | 25.9 | 34.7 | 37.0 | 9.8 | 7.4 | 2.0 |
| 30 | 30 | 40 | 29.4 | 39.4 | 42.0 | 11.1 | 8.4 | 2.2 |
| 37 | 37 | 50 | 35.9 | 48.1 | 51.3 | 13.5 | 10.3 | 2.7 |
| 45 | 45 | 60 | 41.2 | 55.3 | 58.9 | 15.5 | 11.8 | 3.1 |
| 55 | 55 | 75 | 50.4 | 67.6 | 72.0 | 19.0 | 14.4 | 3.8 |
| 75 | 75 | 100 | 69.9 | 93.7 | 99.9 | 26.4 | 20.0 | 5.3 |
| 90 | 90 | 125 | 85.8 | 115.1 | 122.6 | 32.4 | 24.5 | 6.5 |
| 110 | 110 | 150 | 97.7 | 131.0 | 139.6 | 36.9 | 27.9 | 7.4 |

*Note that the provided values are indication. Precise values may vary depending on the compressor technology and the operational characteristics of the compressor and water system.



How much can you save?
 Ask your Atlas Copco representative about our Energy Recovery Calculator! Based on your compressor installation, air system and heat/steam applications, our calculator can determine your savings. It shows you how much heat you can recover and by how much you can reduce your total energy bill



ISO 9001 · ISO 14001
OHSAS 18001

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