

# HEAT RECOVERY



# HEAT RECOVERY: REDUCE COSTS

## Save energy easily and enjoy financial benefits quickly

The energy consumed for the generation of compressed air is converted almost entirely to heat. This is a high potential for savings since one compressed air station with a power requirement of 75 kW during 4000 operating hours, for example, will need approximately 300,000 kWh of power every year. Use this energy in the form of:

- Warm air to supplement space heating
- Warm water to support central heating
- Warm water for industrial water

### Heat energy at no additional cost to you!

The cost of fuel oil, gas, and other forms of energy continues to rise. As a result, the use of energy will increasingly influence the competitiveness of many companies. But the recovery of heat energy can boost overall energy efficiency and contribute to the company's profitability.

At the same time, the required investment is small: On average, related expenses pay for themselves in just a few months. This is an excellent opportunity to reclaim a portion of your operating costs!

### Heat recovery: determine your individualised benefits

How can your company specifically benefit from heat recovery? Perform custom calculations for clarity on your investment and payback period. This will give you a solid foundation for making decisions and provide detailed information on why you should take advantage of this opportunity.

### Saving money and protecting the environment can be easy

Every litre of fuel oil that you save reduces your CO2 emissions by approximately 2.8 kg. Heat recovery systems pay for themselves after one-half to one year on average, depending on capacity utilisation and the level of energy costs.

### Examples of potential energy savings

Compressor rated output	Usable heat	Fuel oil savings/year <sup>1</sup>	Fuel oil cost savings/year <sup>1</sup>
From 6 kW	2.8 kW	700 l	€490.00
37 kW	27 kW	6,720 l	€4,704.00
45 kW	32 kW	8,170 l	€5,719.00
55 kW	40 kW	9,990 l	€6,993.00
75 kW	54 kW	13,620 l	€9,534.00
90 kW	65 kW	16,350 l	€11,445.00
110 kW	80 kW	19,980 l	€13,986.00
132 kW	95 kW	23,980 l	€16,786.00
160 kW	115 kW	29,060 l	€20,342.00
Up to 400 kW	288 kW	72,660 l	€50,870.00

<sup>1</sup> At 2,000 hours heat recovery/year

<sup>2</sup> At a fuel oil price of 0.70 €/litre and 2,000 hours heat recovery/year

## Warm air for space heating

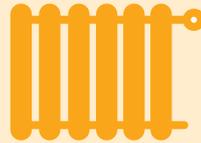
Possible temperature level:  
20 – 25°C above the ambient temperature



Heated cooling air is used via a duct for space heating

## Warm water for heating purposes

Possible water temperature up to 70°C



Compressor oil gives its heat to the heating water via plates

## Heat for industrial process water

Possible water temperature up to 70°C



Even in the case of leaks, safety heat exchanger prevents oil from entering industrial water

up to **96%**  
usable thermal energy

- 76% from the oil cooler
- 14% from the aftercooler
- 6% from the electric motor



High energy cost savings possible per compressor (see table on left)

- 4% unusable thermal energy
- 2% in compressed air
  - 2% radiated heat

ALMiG compressor with integrated or retrofitted heat recovery



## Electrical energy

is converted almost entirely to heat





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