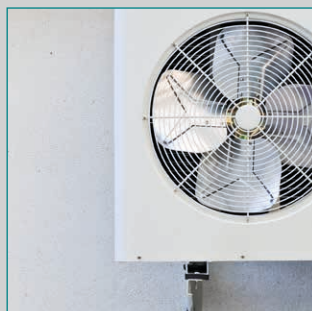


## Screw compressors

# Heat recovery: Saves money and helps the environment!



Made in  
Germany

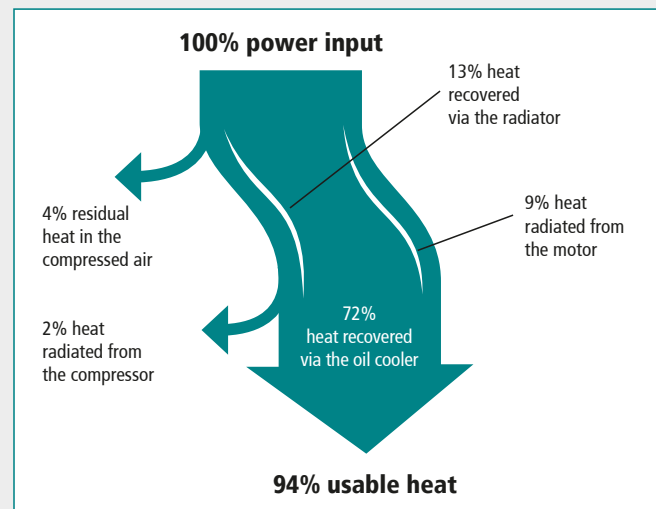


## Heat recovery – an investment that pays off quickly!

When using screw compressors, a large amount of heat is also generated in addition to the actual main product – compressed air. RENNER has developed an effective system for heat recovery. This allows you to recover up to 94% of the electrical energy heat in the form of hot air, industrial water or heating water.

You can use the hot air via exhaust air ducts to heat rooms and premises. By using an oil-water heat exchanger you can warm up your industrial and heating water to a temperature of 65°C. This makes perfect sense ecologically and saves a lot of money!

### Usable heat at optimally matched heat recovery:



## External heat recovery stand-alone unit – set up, connect, benefit!

The various external heat exchangers are mounted in a separate box. This has the advantage that you can retrofit a heat recovery unit to existing screw compressors. The compact box requires only little space and its installation is amazingly easy. The integration into an existing water circuit is done by a plumber. No external energy source is required for operation!

We supply the external heat exchanger box for retrofitting to the following compressors:

- RS-PRO 7.5 – 18.5**
- RS 18.5 – 1-30.0**
- RS-PRO 2-30.0 – 55.0**
- RS 55.0 – 132**

Also for compressors with variable speed control.



## Heat recovery with integrated heat exchanger

The heat exchangers are mounted inside the RENNER screw compressor and are fully integrated into the compressor's oil circuit. The existing water connections on the housing allow you quick and easy integration of the water circuit. Installation in the screw compressor eliminates the additional installation space needed for an external housing.

The built-in heat exchanger is available for the following compressors:

- RS-PRO 2-11.0 – 18.5**
- RS 18.5 – 1-30.0**
- RS-PRO 2-30.0 – 55.0**
- RS 55.0 – 250**

Also available for compressors with variable speed control and as safety heat exchanger.



Heat exchanger

## Potential annual savings using standard heat exchangers!

- standard: inlet temp. 15 °C, outlet temp. 65 °C (industrial water) or inlet temp. 35 °C, outlet temp. 65 °C (reflux heating)
- other temperature ranges on request

The potential annual savings can be calculated using the following formula:

$$\frac{\text{Usable energy (kW) x hours (h) x fuel oil price (€)}}{\text{Calorific value of the oil (kWh/l) x heating efficiency factor}}$$



Factors used		
Compressor	RS-PRO 15.0	RS 55.0
Power consumption in kW	18.30	58.57
Usable energy (72%) in kW	13.18	42.17
Compressor running time in h/d	8	8
Heating season (Oct.-May) in days	210	210
Heating oil price in €/l	0.8	0.8
Calorific value of fuel oil in kWh/l	9.86	9.86
Efficiency of fuel oil for heating	85%	85%

Potential annual savings when using a heat exchanger in a RENNER RS-PRO 15.0:

$$\frac{13.18 \text{ kW} \times 1680 \text{ h} \times 0.8 \text{ €}}{9.86 \text{ kWh/l} \times 0.85} = \underline{\underline{2,113.58 \text{ Euro}}}$$

Potential annual savings when using a heat exchanger in the RENNER RS 55.0:

$$\frac{42.17 \text{ kW} \times 1680 \text{ h} \times 0.8 \text{ €}}{9.86 \text{ kWh/l} \times 0.85} = \underline{\underline{6,762.50 \text{ Euro}}}$$

## COMPRESSED AIR FOR ALL APPLICATIONS



RENNER GmbH Kompressoren, a family run business established in 1994, develops and assembles economical and energy-efficient compressors. A broad range of compressed air accessories are also part of the product portfolio. The structure and size of the company ensure flexible decisions and short lead times, thus providing optimal focus on the requirements of the customers.

### THE RENNER MANUFACTURING AND SUPPLY PROGRAMME:

We can supply you with the right compressor for any application – guaranteed.

#### SCREW COMPRESSORS:

- from 2.2 to 355 kW
- up to 40 bar, e.g. for manufacture of PET bottles
- compact systems with air receiver, refrigeration dryer, and variable speed control
- heat exchanger integrated or as an external box
- special applications: gas compression, operation of drilling devices, rail, and special-purpose vehicles
- customized models designed to customer specifications

#### OIL-FREE COMPRESSORS:

- SCROLL compressors for oil-free compressed air from 1.5 to 30.0 kW
- water-injected screw compressors for oil-free compressed air in breathing air quality from 18.5 to 120 kW



#### PISTON COMPRESSORS:

- from 1.5 to 11.0 kW
- stationary or mobile, with or without sound insulation

#### CONTROL SYSTEMS:

- compressor control systems
- superordinate control systems
- state-of-the-art web server monitoring



#### COMPRESSED AIR ACCESSORIES:

- air filters, air receivers, refrigeration dryers, adsorption dryers, condensate drains, and oil-water-separators

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