

Screw compressors

RS 2-75 – 109 D

RSF 2-75 – 127 D

with direct drive

 **MADE IN GERMANY**



Motor power: 75 – 127 kW



RENNER GmbH Kompressoren – success rooted in tradition.

RENNER GmbH Kompressoren have been known for reliable compressed air for more than 25 years. As a family owned business with fast decision-making processes, we set the benchmarks in developing, manufacturing and selling efficient screw compressors and complete compressed air stations.

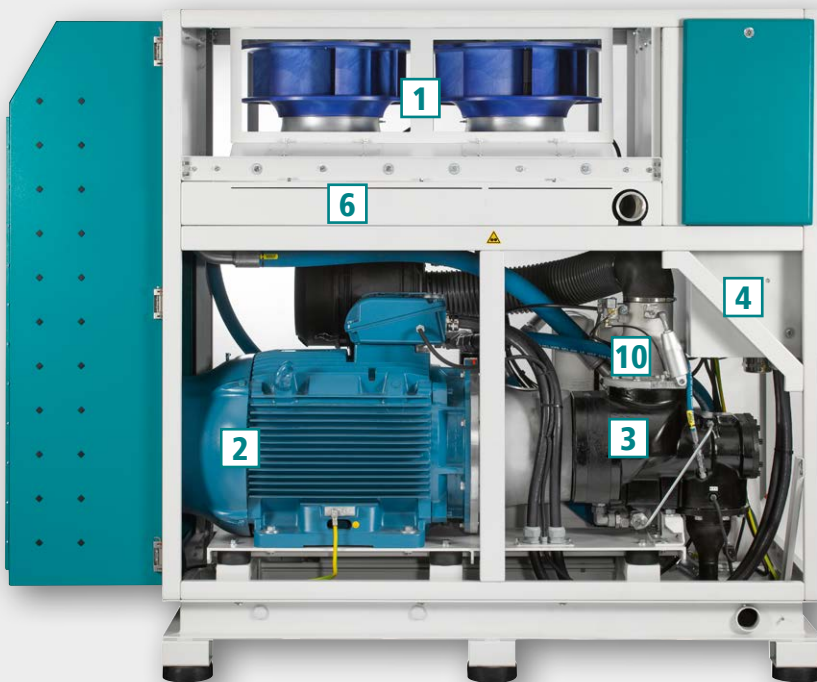
RENNER has more than 200 employees to provide you with first-class technical advice, robust compressor engineering, and reliable service in virtually more than one hundred countries.

We offer fast maintenance services in Germany and all over the world through our large distributor network. You can rely on the high quality standards of our oil-injected screw compressors as well as in the segments of oil-free compressed air and piston compressors. We are proud to assist you as a competent sales and service partner worldwide!

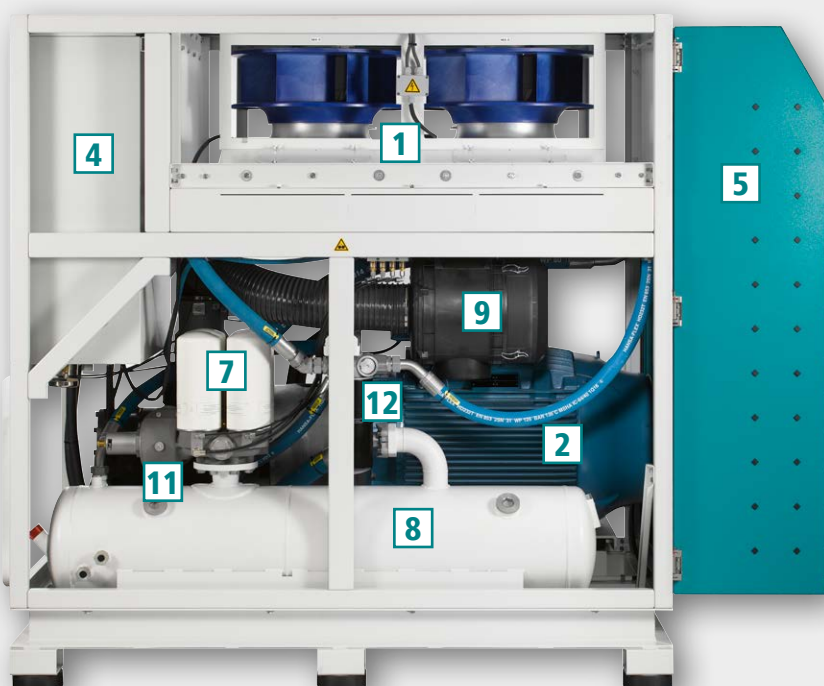


RENNER – the expert in screw compressors.

Easily removable service panels ensure excellent accessibility to all maintenance-related components.

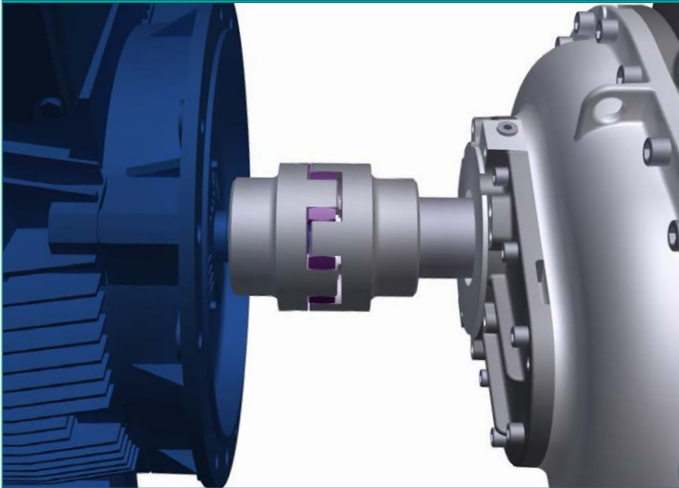


- 1** Radial fan
- 2** Motor
- 3** Air end
- 4** Switch cabinet
- 5** Rear duct silencer
- 6** Cooler
- 7** Oil separator cartridges
- 8** Oil tank
- 9** Air Filter
- 10** Suction regulator
- 11** Minimum pressure / check valve
- 12** Oil filter



RENNER direct driven compressors in detail

Drives



1:1 direct drive connects the air end directly to the motor. The almost loss-free power transmission guarantees reliable, high-performance compressor operation. The regular maintenance requirement is reduced to lubrication of the motor. All the electronic components are branded products of leading manufacturers.

Electric motor IE3



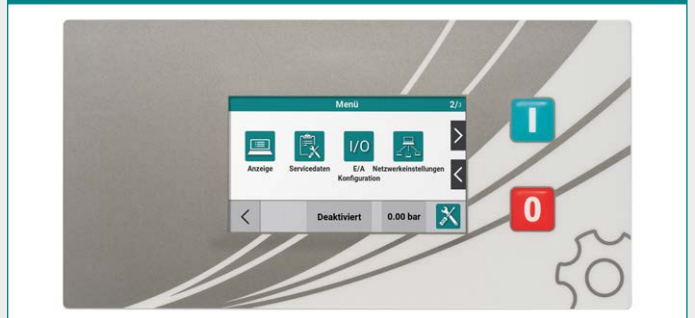
We use only IP55 electric motors made by renowned manufacturers. The drive motors are monitored both thermally (via the thermistor of the motor) as well as electronically (overload protection via the frequency converter) as standard. The load on the motor is reduced on start up and during operation by means of the direct drive combined with a high quality, maintenance-free shaft coupling with a modern isolating element. The drive motors of compressors with variable speed control are equipped with current insulated bearings as standard.

Air end block – reliable centrepiece



The centrepiece of the compressor is the air end, which has been designed and manufactured using the most advanced production technology in Germany. The optimally adjusted air end for each compressor can be defined by modular design. In compressors with variable speed control, in which the pressure can vary, converter adjustments can be made in order to optimally adjust the speed of the compressor to its performance. The machine has been designed to optimally meet your compressed air requirements and works in an energy efficient way.

Control



Compressed air supply must be reliable and economical. This is guaranteed by an intelligent control system both for individual compressors and for RENNER compressed air stations. All machines are equipped as standard with the control RENNERtronic Touch or optionally with RENNERtronic Plus Touch. Compressors from other manufacturers can also be connected to our control systems.

RENNER direct driven compressors in detail

Switch cabinet



The switch cabinet has been integrated in the machine and is located in the cooled air current. Due to the separate switch cabinet a protection class of IP54 has been achieved. The converter of a compressor with variable speed control has been integrated in the switch cabinet. All electrical components are branded products of leading manufacturers.

Frequency converters

The frequency converter minimises idle times and optimises supply when compressed air requirements fluctuate. Start-up peaks are avoided and the compressor's free air delivery is controlled continuously – which saves electricity cost and reduces on and off cycles of the compressor. The total cost for your compressed air supply are significantly reduced and investment cost will be recovered in a short period of time.

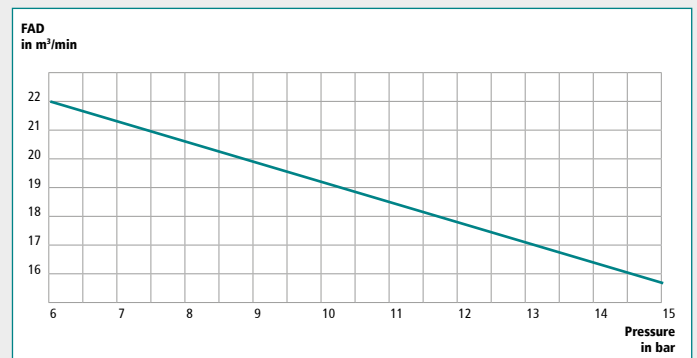
All RENNER compressors with variable speed control adapt flexibly and automatically to current pressure regarding both pressure and free air delivery. Thus the compressor provides at all times the optimally adjusted free air delivery in the set pressure range (6 to 15 bar).

- Free air delivery and control range adjust automatically to current pressure.
- Speed and load limits of the motor are observed.
- If pressure drops due to high air consumption, the Reflex function releases reserves that increase free air delivery.
 - ▶ Reliability of supply
- The pressure range from 6 to 15 bar can be configured variably without changing drive elements.

Oil circuit



The oil quantities in the compressors are adjusted in a way that ensures that oil exchange intervals can be extended depending on the ambient conditions. An oil level sensor monitored by the control system has been integrated as standard. All the units of this series come with a horizontal oil separation vessel in which the oil is separated from the compressed air highly efficiently at low speeds. The large surface of the oil in a horizontal oil separation vessel contributes to the prevention of foam build-up.



Details RS 2-75 – 109 D / RSF 87 – 127 D

Oil separation system



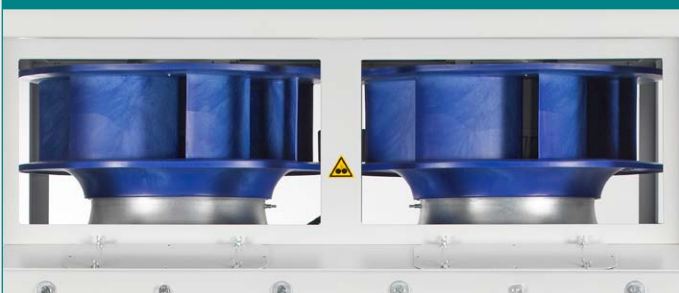
Compressors up to 127 kW are equipped with three or four external separator cartridges which can be changed by a simple spin-off/spin-on procedure. Thanks to the outstanding separation efficiency of the entire system, the compressors can be used in the pressure range from 5,0 to 15,0 bar.

Cooler unit



The horizontally mounted cooler can be cleaned by cleaning lids. Alternatively the cooler can be pulled out like a drawer for the purpose of cleaning. Thanks to well dimensioned after coolers for oil and compressed air as well as the integrated oil temperature control, the compressors run reliably even at high ambient temperatures.

Radial fans



The compressors are equipped with radial fans for an optimum operating temperature and high residual pressure. Compared to a conventional cooling system, the radial fan requires less drive energy and operates quietly and powerfully. In the area of design and dimensioning, close cooperation is maintained with German fan manufacturers to achieve optimum cooling air flow and low-vibration operation. For applications with high levels of ambient dust, the systems are equipped with intake air filters as standard. The exhaust air can optionally be discharged to the side.

Easily accessible maintenance parts



The maintenance parts are easily accessible thanks to removable doors and hinged rear duct silencer. In order to access larger components like motor or air end, the longitudinal bracing can be removed. The separate switch cabinet ensures access to the electrical components.

Energy savings: compressors with variable speed control. The RSF series is characterized by quality and efficiency.

RENNER screw compressors with variable speed control are designed for tough industrial applications. Additionally the compressors are equipped with the RENNERtronic Touch intelligent control and monitoring system.

Do you know how much energy your compressed air station requires and how much goes to waste?

About 60,000 compressed air stations in Germany consume 14 billion kWh of electricity annually. This corresponds to 5% of the electricity consumption of all German industrial plants. The energy savings potential of 30% is immense (4.2 billion kWh)! Moreover your commitment can contribute to reducing environmental pollution.

Compressed air stations work in the most efficient and economical way, if the entire system has been fine-tuned. RENNER, the experienced German manufacturer of quality compressor systems, together with its reliable local distributors, can meet these requirements and get the job done for you.

Our partners in distribution are qualified to check your compressed air station in order to determine your savings potential and guarantee long-term economical operation. We can demonstrate to you, how you could benefit by bringing down your operating cost and making an active contribution to reducing CO₂ emissions at the same time.

Optimum use of energy: RENNER screw compressors with variable speed control

- Use of an efficient control system for compressors
- Use of heat recovery systems
- Use of advanced compressed air piping systems without leakage
- Regular service by factory-trained service technicians

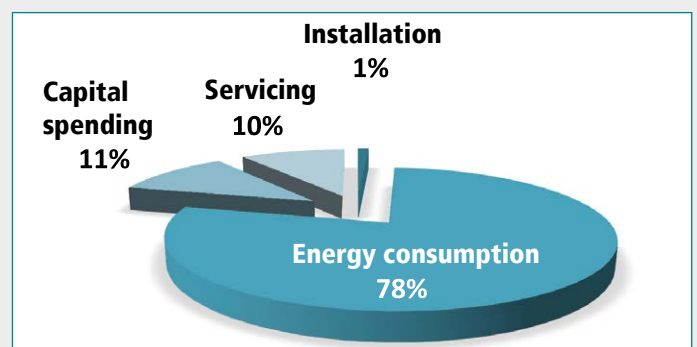
Variable speed control

Strong fluctuations of compressed air cannot be avoided in many operations. Even in such cases compressed air can be generated economically – RENNER screw compressors with variable speed control guarantee a cost efficient steady flow of compressed air. The compressor speed adapts to the actual need for compressed air with variable speed control. This guarantees economic operation; the frequency converter is integrated and firmly installed in the switch cabinet.



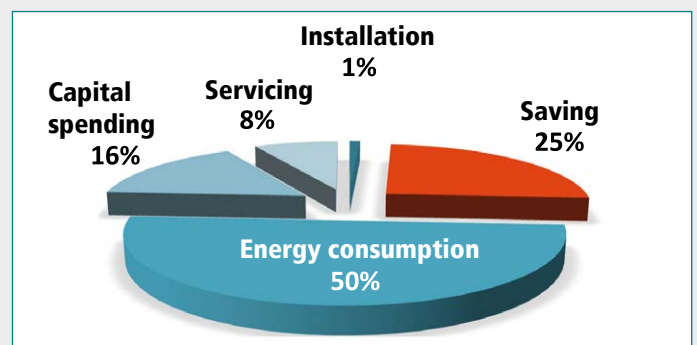
Comparing total cost after 5 years:

Fixed speed compressors:



After 5 years of operation, the energy cost usually amounts to 78% of the total cost of a conventional compressor. The only way to reduce the overall cost is to reduce the cost of energy.

RENNER's RSF compressors with variable speed control:



A RENNER RSF compressor can save up to 35% of your energy costs. This yields total savings of 25% of your compressor station and improves your overall energy balance considerably.

RENNER

Kompressoren



TOUCH ME!

RENNER compressor controls

- Smartphone-like operation via 4.3" or 7" touchscreen
- Scheduler as standard
- Easy update via USB stick
- Robust against dirt and dust
- Excellent price-performance ratio
- **NEW:** RENNERtronic Plus Touch with web server

Industry 4.0

RENNERtronic Touch



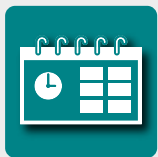
Smartphone-like operation:
Intuitively operable touchscreen on state-of-the-art technology.



Events history:
The last 50 messages are displayed including date and time.



Pressure and temperature diagram:
Extensive statistics on pressure and temperature diagrams with hourly scaling.



Scheduler with six channels:
This can be used to switch the four pressure bands, four potential-free relay contacts or the compressor.



USB port:
Updates can be easily uploaded using a USB stick.



Replacing the control:
RENNERtronic Touch (4.3" touchscreen) and RENNERtronic Plus Touch (7" touchscreen) are easily interchangeable.



Service indicator:
Maintenance message will be shown when the set operating hour intervals is reached or at the latest after one year.



Display of compressor utilisation:
Recording of operating and load hours as well as the percentage load for compressors with variable speed control.



Different code levels:
Parameter access is restricted depending on the code level and the compressor is thus protected against unauthorised access.



Flexible inputs and outputs:
Freely assignable and inscribable digital inputs as well as four potential-free outputs.



Control of frequency converters:
The direct connection via RS485 bus interface eliminates the need for a separate converter display. Exchange of information in **plain text**.



! RENNERtronic Plus Touch with additional functions

The RENNERtronic Plus Touch fulfils **all the functions of the RENNERtronic Touch**. But it can do even more!



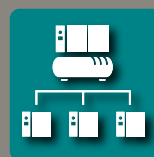
7" touchscreen:
Overview a multitude of information simultaneously and clearly.



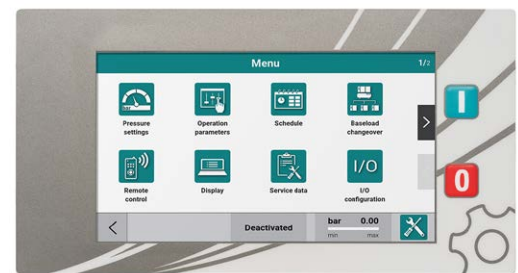
Scheduler with eight channels:
In addition to the above-mentioned functions, priorities for Base Load Change Over can also be assigned via the scheduler.



Pressure and temperature diagram:
Extensive statistics on pressure and temperature diagrams with daily, weekly and monthly scaling.



Base Load Change Over:
The software is equipped with an extensive Base Load Change Over. This is connected via an additional interface module (Modbus). This allows you to control up to eight additional compressors. The compressors are connected with a network cable.





Screw compressors

RS 2-75 – 109 D direct drive

RSF 2-75 – 127 D direct drive, with variable speed control

all with electronic control RENNERtronic Touch, rear duct silencer and pre-filter frame

RS 2-75 – 109 D

Model	Free air delivery ⁽¹⁾								Motor power		Compressed air outlet	Noise level	Dimensions L x W x H	Weight
	7.5 bar		10 bar		13 bar		15 bar		kW	HP				
	m ³ /min	cfm	m ³ /min	cfm	m ³ /min	cfm	m ³ /min	cfm			inch	dB(A) ⁽²⁾	mm	kg
RS 2-75 D – 7.5 / 10 bar	12.40 ⁽³⁾	438 ⁽³⁾	11.25	397	–	–	–	–	75	100	G2½	74	2547 x 1068 x 2079	2046 ⁽⁴⁾
RS 90 D – 7.5 / 10 / 13 bar	16.60 ⁽³⁾	586 ⁽³⁾	14.40 ⁽³⁾	509 ⁽³⁾	12.24	432	–	–	90	120	G2½	74	2547 x 1068 x 2079	2244 ⁽⁴⁾
RS 90 D – 15 bar	–	–	–	–	–	–	10.35 ⁽³⁾	366 ⁽³⁾	90	120	G2½	74	2547 x 1068 x 2079	2083
RS 109 D – 7.5 / 10 / 13 bar	19.10 ⁽³⁾	675 ⁽³⁾	16.50 ⁽³⁾	582 ⁽³⁾	14.31 ⁽³⁾	505 ⁽³⁾	–	–	110	150	G2½	74	2547 x 1068 x 2079	2335 ⁽⁴⁾
RS 109 D – 15 bar	–	–	–	–	–	–	12.17	429	110	150	G2½	74	2547 x 1068 x 2079	2287

⁽¹⁾ according to ISO 1217 Annex C ⁽²⁾ according to DIN EN ISO 2151:2009 ⁽³⁾ with gearbox ⁽⁴⁾ weight at 10 bar; deviating weight at other pressure levels

RSF 87 – 127 D

Model	Free air delivery (REFlex) ⁽¹⁾⁽²⁾												Motor power		Compressed air outlet	Noise level	Dimensions L x W x H	Weight
	min.		max. at 6 bar		max. at 8 bar		max. at 10 bar		max. at 13 bar		max. at 15 bar		kW	HP				
	m ³ /min	cfm	m ³ /min	cfm	m ³ /min	cfm	m ³ /min	cfm	m ³ /min	cfm	m ³ /min	cfm			inch	dB(A) ⁽³⁾	mm	kg
RSF 2-75 D – 6-10 bar	4.13	145	14.34	506	12.53	442	11.23	397	–	–	–	–	75	100	G2½	75	2547 x 1068 x 2151	2105
RSF 87 D – 6-15 bar	1.59	56	14.33	506	13.88	490	12.45	440	10.51	371	9.59	339	87	118	G2½	75	2547 x 1068 x 2151	1724
RSF 2-87 D – 6-13 bar	2.85	101	15.89	561	14.24	503	12.73	450	10.80	381	–	–	87	118	G2½	75	2547 x 1068 x 2151	1801
RSF 97 D – 6-15 bar	2.85	101	16.43	580	16.37	578	14.71	519	12.63	446	11.31	399	97	130	G2½	76	2547 x 1068 x 2151	2145
RSF 127 D – 6-15 bar	2.85	101	22.15	782	20.71	731	19.40	685	16.40	579	15.60	551	127	170	G2½	77	2547 x 1068 x 2151	2394

⁽¹⁾ according to ISO 1217 Annex E ⁽²⁾ REFlex function: pressure range continuously variable ⁽³⁾ according to DIN EN ISO 2151:2009

Options	Part no.
Electronic control RENNERtronic Plus Touch	23836
Ball valve G2½", PN16	10526
Permanent magnet motor (PM-motor)	on request
IE4 motor	on request
Standstill heater – additional heater 2.2 kW, 230 V / 50 Hz, IP54, for all types, controllable	00124
Tropical-modification up to 47°C ambient temperature	on request
Water-cooling system	on request
Heat recovery	on request
Packaging	on request

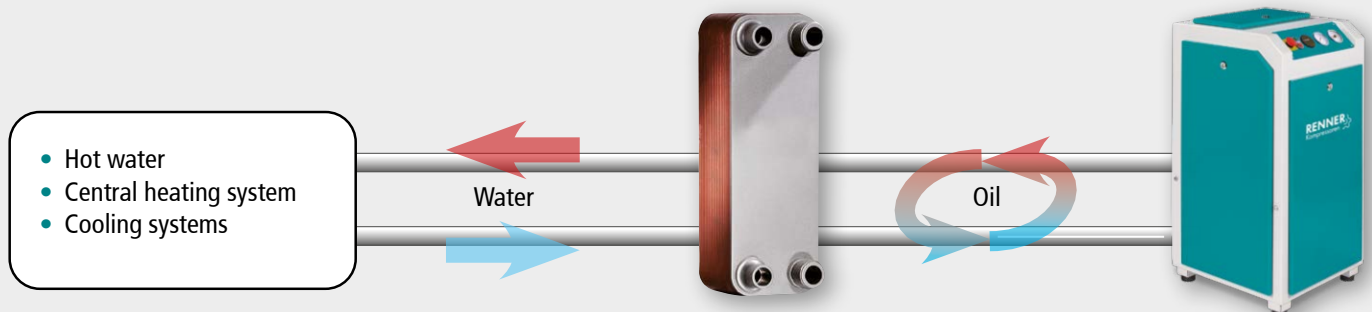
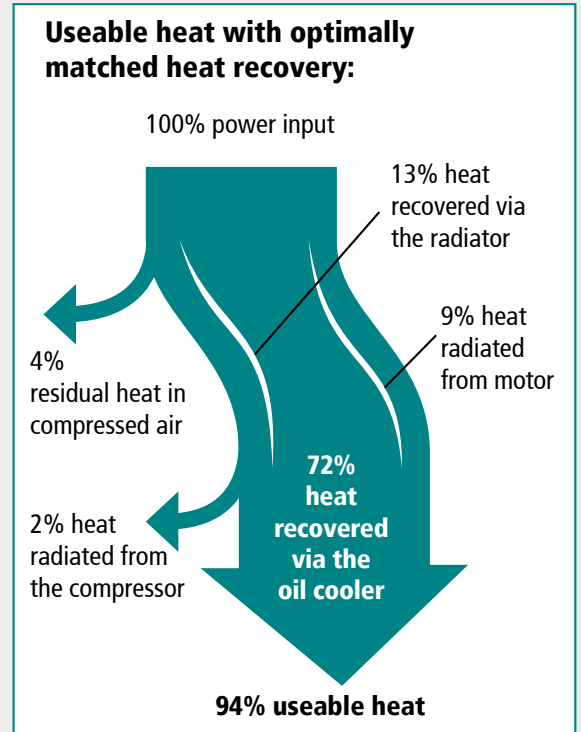
Optional: internal and external heat recovery.



When using screw compressors, a large amount of heat is also generated in addition to the actual main product – compressed air. With RENNER heat recovery, you can regain up to 94% of the energy you have already used as heat in the form of hot air, industrial water or hot water. This makes perfect sense ecologically and saves a lot of money!

Heat recovery via plate heat exchanger: the heat exchangers feature a very simple installation, the integration into the existing water cycle is done by an installer. No external energy is required for the operation.

- For RENNER screw compressors 7.5 – 250 kW
- 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 available on request
- Safety heat exchanger (drinking water)
- Retrofitting available on request



Integrated heat exchanger



External heat exchanger



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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