

**RENNER – The expert in screw compressors**

# RS-D and RSF-D series with direct drive

 Made in  
Germany



**All compressors  
available with  
frequency control!**

**Motor size: 95 – 355 kW**



### The company – reliable and dynamic!

As a dynamic, medium-sized family company, RENNER GmbH has specialised in the development and production of screw compressors for demanding compressed air users since 1994. A qualified team works permanently on expanding and optimising the wide range of products. Customer benefits and market demands are the focus of our attention. Details such as economy, energy efficiency, environmental protection and maintenance friendliness enjoy the highest priority. This also applies to the RS-D series.



RENNER has the highest requirements for economic and sustainable compressed air generation. Competent technical advisers are responsible for planning optimally designed compressed air stations – individually customised to the requirements of each individual customer. A high level of product quality and fast response time from the RENNER sales and service organisation for repairs and spare parts requirements guarantee the best possible safety. Worldwide!

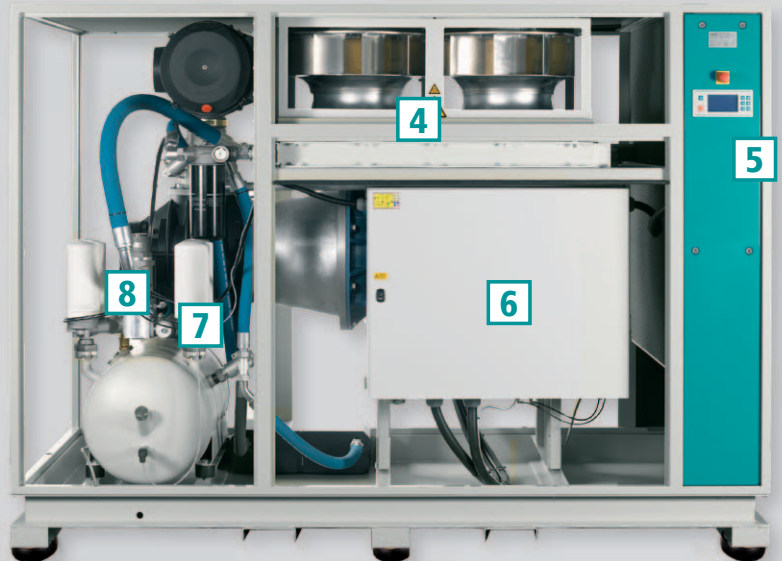
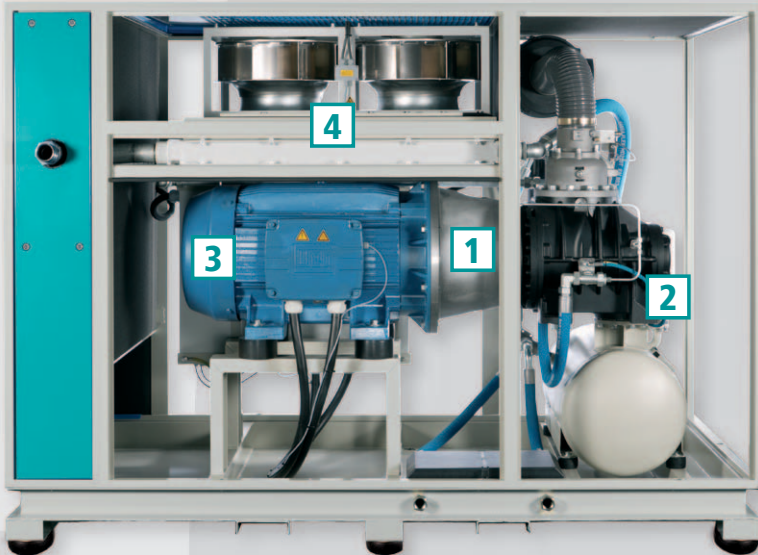
### RENNER - one of the best in compressors!





## RENNER – The expert in screw compressors

Easy removable service panels ensure excellent accessibility to all control- and maintenance-related components.



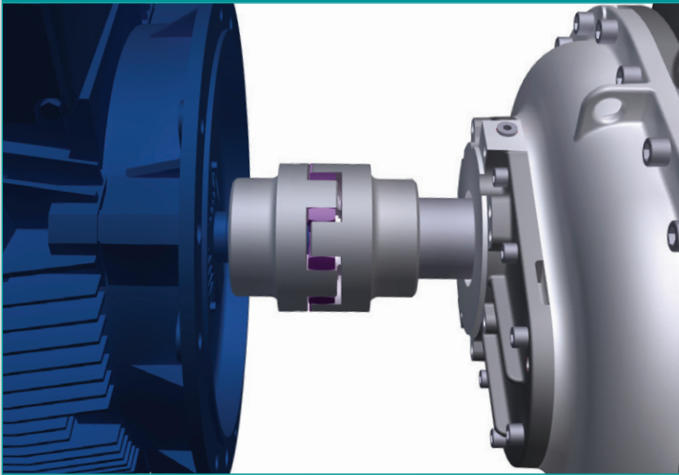
- 1** Direct drive – soft start, almost zero loss power transmission
- 2** Air end – efficient and effective to the highest standards
- 3** Electric motor – economical and robust
- 4** Cooler unit – large surface area, highest performance and effectiveness for quieter running
- 5** Controller – intelligent, fast response with full digital monitoring (two variants possible)
- 6** Control cabinet – optionally with integrated, energy saving frequency converter
- 7** Separation system – guarantee's 100% compressed air quality.
- 8** Oil circuit – works efficiently with long maintenance intervals

**RENNER compressors – easy installation and cost-efficient maintenance.**

## RS 95 D – RS 355 D: The direct driven compressors from RENNER in detail:

What has the direct-drive series got to offer over and above the time-honoured RENNER design features? An innovative, user-friendly concept totally geared to performance and economy.

### 1 Drives and electrics



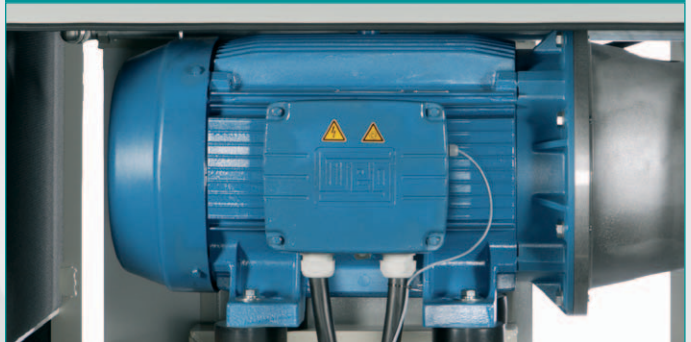
The direct drive connects the compressor block with the drive motor in a 1:1 relationship. The almost loss-free power transmission guarantees reliable, high-performance compressor operation. The regular maintenance requirement is reduced to lubrication of the motor. All the electronic components are brand products of leading manufacturers. The control cabinet is integrated in the system and is situated in the cooled-off air flow. All machines come equipped with the electronic RENNERtronic controller as standard or optionally with the RENNERtronic Plus.

### 2 Air end block – reliable centrepiece



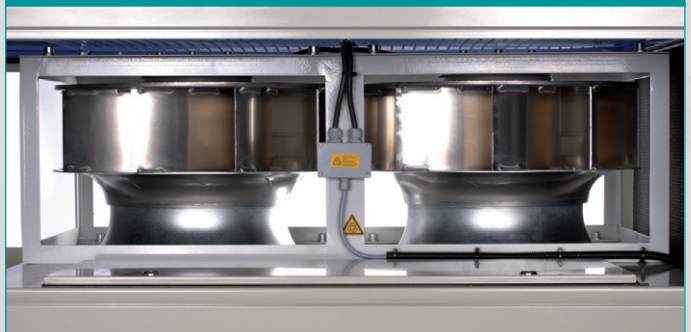
The centrepiece of the compressor is the air end, which is constructed and manufactured with the most modern production methods in Germany. The optimal air end for your compressor can be used on a modulating basis. In frequency-controlled units, where the operating pressure changes, adjustments can also be made on the frequency controller to optimally adjust the speed of the compressor to the compressor performance. The unit is thus precisely designed to the customer's compressed air requirements and power is used economically.

### 3 Electric motor



Only electric motors from well-known manufacturers of protection class IP55 are used. As a standard, the drive motors are monitored both thermally (via the thermistor of the motor) as well as electronically (overload protection via the frequency converter). The load on the motor is reduced on starting and during operations due to the direct drive combined with a high quality, maintenance-free shaft coupling with a modern isolating element. The drive motors of frequency-controlled compressors are equipped with antistatic bearing shields as standard.

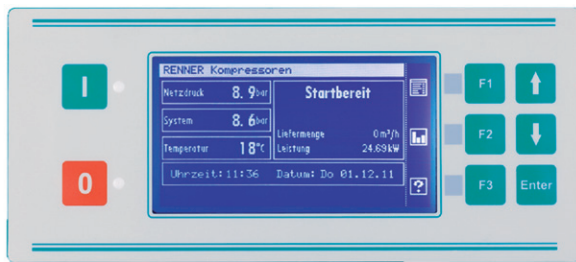
### 4 Cooler unit



Compressors in the RS 95 D - RS 160 D series are equipped with two parallel radial fans with a high residual thrust. Compared to a traditional cooling system, the radial fans require less drive energy and operate quietly and powerfully. With 160 kW output, RENNER compressors are equipped with an effective axial fan. Frequency control is optionally available. When it comes to conception and design, we work closely with German fan manufacturers for the best cooling air flow and vibration-free operation. The units can be optionally equipped with air inlet filter mats for applications with a high level of ambient dust exposure. With generously sized oil and compressed air aftercoolers as well as integrated oil temperature control, the units run perfectly even at high ambient temperatures. The compressors can be operated with open doors without overheating.



## 5 Control

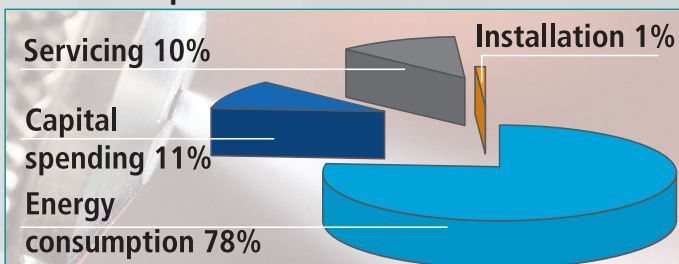


Compressed air supply must be reliable and economical. This is guaranteed with an intelligent controller both for individual compressors as well as for RENNER compressed air stations. Third party makes can also be connected to our controllers. Please see next page for detailed information on the controllers.

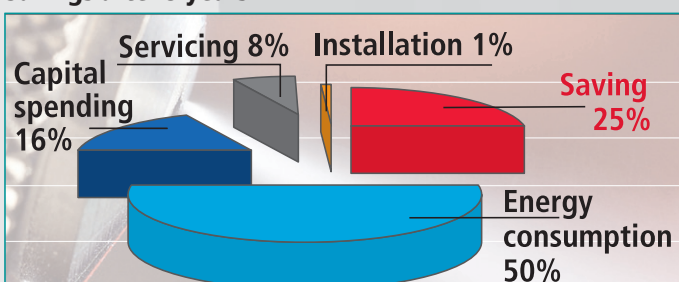
## 6 Frequency converters (optional)

The frequency converter minimises idle times and optimises supply with fluctuating compressed air requirements. Start-up peaks are avoided and the compressor's delivery rate is controlled continuously – that saves electricity costs! The total costs for your compressed air supply are significantly reduced and investment costs are amortised in the shortest possible time.

### Standard compressor



### Savings after 5 years:



## 7 Oil separation system



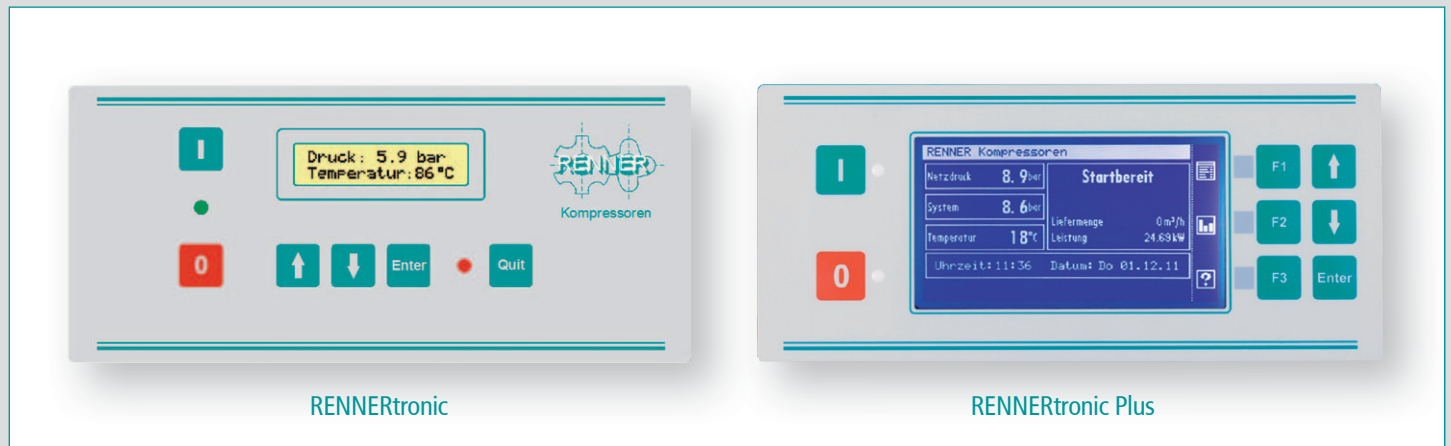
Compressors up to 160 kW are equipped with external separators that can be changed in a simple spin-off/spin-on process. Larger units have an internal separator cartridge. Due to the excellent separation efficiency of the system as a whole, the compressors can be used in the pressure range of 5.0 to 15.0 bar. Special pressures on request.

## 8 Oil circuit



The amount of oil in the units is determined in such a way as to extend the oil change intervals (depending on ambient conditions). An oil level sensor is integrated as standard and is read by the controller. All the units in this series have a horizontal oil separation vessel in which the oil is separated from the compressed air highly efficiently at low speeds. The large surface area of the oil in a horizontal oil separation vessel is a major factor in the prevention of foam build-up.

## RENNER compressor controllers – for greater safety and lower costs



### Performance characteristics of the RENNERtronic (standard for all compressor types RS 95 D – RS 355 DW)

The 2-line display of the RENNERtronic always provides information on the current network pressure and the oil temperature in the first line and the operating mode in the second line in plain text. The logical menu structure simplifies handling even for novice users. Individual adjustments, e.g. starting and stop pressures, can be carried out easily.

### Besides the basic functions for controlling compressors, the controller has the following features:

- Pressure sensor-controlled pressure control with two individually adjustable pressure bands
- Protection of controllers with various code levels
- Operating and load hours recording
- Displays remaining time until the next service
- Timeous plain text messages of upcoming maintenance intervals (100 operating hours before service is due). Different intervals can be programmed for the different components.
- Event log of the last 10 events stating the respective operating hour
- Immediate switch-off in the event of relevant faults (e.g. excess current), soft switch-off for faults irrelevant to the compressor (e.g. refrigerant drier has iced over)
- 3 freely assignable digital inputs with 26 selectable functions
- 2 freely assignable potential-free contacts with 15 selectable functions
- 1 free analogue input for optional monitoring of system pressure
- Integrated automatic re-start (not activated ex factory)
- Integrated speed control function for frequency converter
- Integrated base load alternation function for controlling up to 4 additional compressors
- RS485 interface for:
  - connecting optional base load alternation module for controlling 4 compressors
  - connecting optional I/O extension module with 8 additional digital inputs and 4 additional voltage-free outputs
  - connecting optional Profibus DP module
  - direct connection to RENNER integrated controller or as a slave unit to the RENNERtronic Plus
  - connecting the update device for updating firmware
- Service and fault messages via SMS to up to 4 programmable mobile phone numbers (optional)

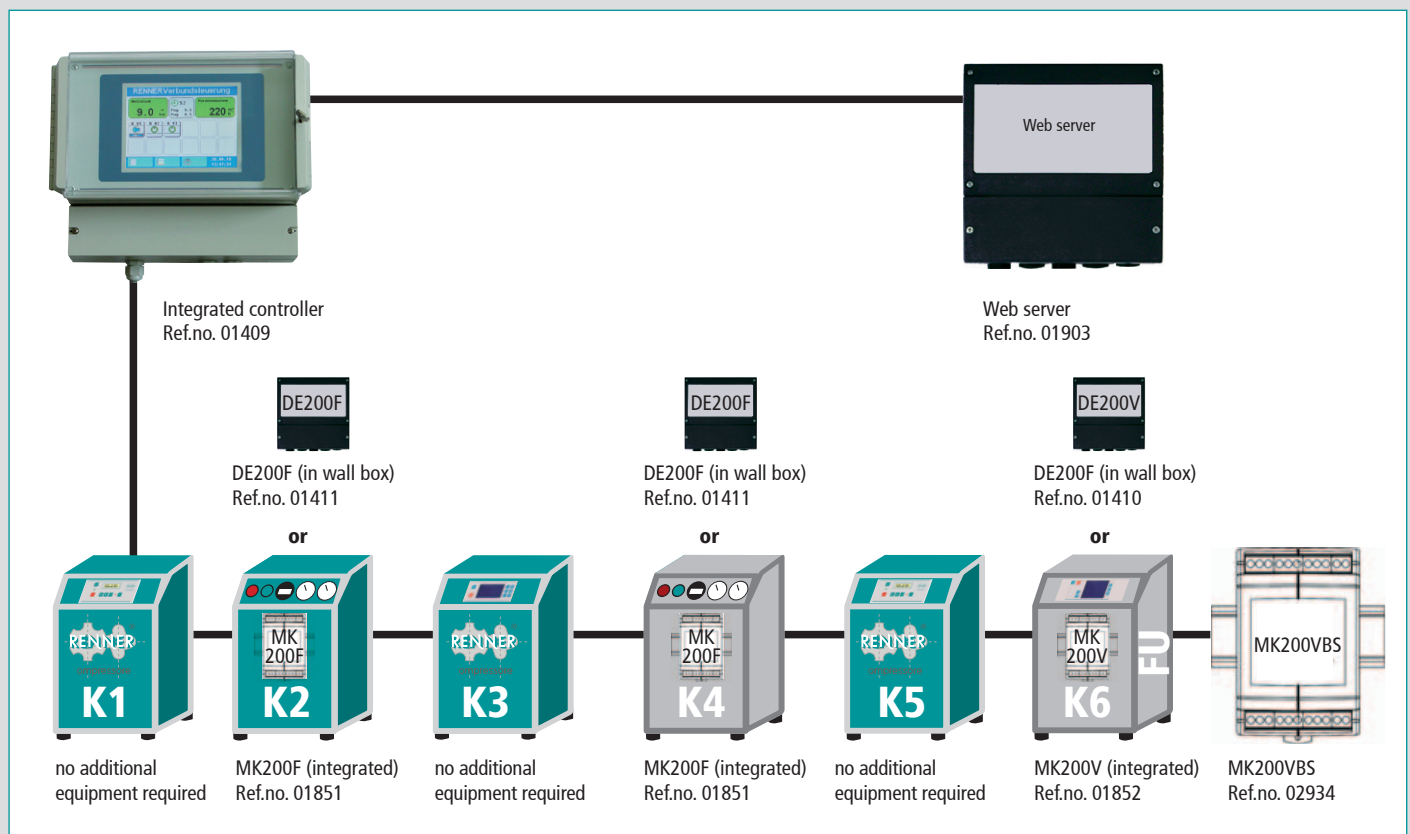
### The RENNERtronic Plus offers the following additional advantages (optionally available for all compressor types RS 95 D – RS 355 DW)

- Even better overview of information due to a large full graphic display with additional display of flow and power consumption
- Numerous statistical analyses displayed graphically
- Integrated real-time clock with 7 timer channels
- System pressure monitoring as standard
- When using the BLCO function, up to 2 slave compressors can be connected without requiring an additional module as well as up to 4 compressors with RENNERtronic or RENNERtronic Plus controllers via the RS485 interface
- Integrated Modbus interface (requires additional software update)
  - 9 freely assignable digital inputs with 39 selectable functions
  - 4 freely assignable potential-free contacts with 28 selectable functions

## RENNER integrated controller

Use your compressed air station economically! RENNER's integrated controller is a higher level, intelligent controller for the optimal management and monitoring of your compressed air station.

RENNER's integrated controller facilitates the reliable and economical operation of your compressor. By connecting your compressors intelligently and based on consumption, you will not only exploit major energy saving potentials but your machines will also be more reliable. The display has a touch screen and is easy to operate. All information is displayed in plain text.



### Performance characteristics/special features of the RENNER integrated controller:

- 1) Controls up to 12 compressors irrespective of the machine type:
  - RENNER compressors
  - Third party makes
  - Standard compressors with load/idle cycle control
  - Speed-controlled or fixed speed compressors
  - Piston or screw compressors
- 2) All compressors operate in one common, narrow pressure band. This means:
  - Same switch on and off points for all compressors
  - Pressure band can be reduced to a minimum
  - High energy savings due to maximum pressure reduction
  - Older compressors also become more economical in next to no time

Model	Description
Integrated controller	control unit for up to twelve compressors incl. pressure sensor
MK 200 F	additional module for third party compressors and RENNER standard compressors
MK 200 V	additional module for the electrical cabinet installation for frequency-controlled third party compressors
DE 200 F	additional module for wall mounting for fixed speed compressors and RENNER standard compressors
DE 200 V	additional module for electrical cabinet installation for frequency-controlled third party compressors
MK 200 VBS	additional inputs and outputs for the integrated controller

## ► RENNER direct driven compressors

RS 95-315 D / RS 355 DW / RSF 110-315 D / RSF 355 DW

Maximum pressure 15 bar (gauged) with RENNERtronic electronic controller



### RS 95 - 315 D; RS 355 DW; RSF 110 - 315 D; RSF 355 DW

Model	Free air delivery <sup>1</sup> m <sup>3</sup> /min / cfm				Motor power		Compressed air outlet	Measurements	Approx. weight
	7,5 bar	10 bar	13 bar	15 bar	kW	CV	BSP/DIN Standard	L x W x H in mm	in kg
RS 95 D	16,64/587	14,52/512	12,24/432	10,86/983	95,0	127,5	2"	2830 x 1460 x 2225	2750
RS 110 D	19,10/674	16,60/586	14,39/508	12,17/429	110,0	147,5	2"	2830 x 1460 x 2225	2800
RS 132 D	23,61/833	20,43/721	16,15/570	15,10/533	132,0	177,0	2½"	2830 x 1460 x 2225	3150
RS 160 D	27,95/987	25,04/884	19,52/689	18,82/664	160,0	214,5	2½"	2830 x 1460 x 2225	3180
RS 185 D	31,70/1119	27,67/977	22,89/808	20,21/713	185,0	248,0	DN100	3500 x 2100 x 2270	4700
RS 200 D	35,75/1262	31,33/1106	---	---	200,0	268,0	DN100	3500 x 2100 x 2270	4900
RS 220 D	---	---	27,04/955	23,03/813	220,0	295,0	DN100	3500 x 2100 x 2270	4930
RS 250 D	44,42/1568	35,80/1264	30,14/1064	26,32/929	250,0	335,0	DN100	3500 x 2100 x 2270	5100
RS 280 D	49,22/1738	44,35/1566	34,06/1202	29,91/1056	280,0	375,5	DN150	3500 x 2100 x 2270	5500
RS 315 D	50,70/1790	44,55/1573	38,90/1373	33,77/1192	315,0	422,5	DN150	3500 x 2100 x 2270	5600
RS 355 DW	---	50,10/1769	43,56/1538	38,53/1360	355,0	476,0	DN150	3500 x 2100 x 2270	6200
RSF 110 D	5,73-19,1/202-674	4,98-16,6/175-586	4,06-13,84/143-488	3,61-12,96/127-457	110,0	147,5	2"	2830 x 1460 x 2225	2950
RSF 132 D	7,08-23,61/250-833	6,13-20,43/216-721	4,85-16,15/171-570	4,2-15,5/148-547	132,0	177,0	2½"	2830 x 1460 x 2225	3210
RSF 160 D	8,39-27,95/296-987	9,59-25,04/338-884	9,59-20,01/338-706	5,90-19,60/208-692	160,0	214,5	2½"	2830 x 1460 x 2225	3650
RSF 200 D	14,5-35,7/512-1262	15,2-31,3/536-1106	8,37-24,3/295-858	6,47-21,76/228-768	200,0	268,0	DN100	3500 x 2100 x 2270	5120
RSF 250 D	18,0-45,0/635-1589	18,0-37,87/635-1337	8,37-31,05/295-1096	8,37-27,93/295-986	250,0	335,0	DN100	3500 x 2100 x 2270	5530
RSF 315 D	22,1-55,4/780-1956	18,8-46,95/664-1658	18,8-40,5/664-1430	18,8-35,99/664-1271	315,0	422,5	DN150	3500 x 2100 x 2270	5700
RSF 355 DW	---	18,8-52,2/664-1843	18,8-44,3/664-1564	18,8-39,6/664-1398	355,0	476,0	DN150	3500 x 2100 x 2270	6320

RS 355 DW and RSF 355 DW with water cooling  
<sup>1</sup> as per ISO 1217

We reserve the right for technical modification.

We have the right accessories for the most varied of applications: compressed air receiver, cyclone separator, compressed air filter, refrigerant drier, adsorption drier, steam trap and oil/water separating system.

#### Optional extras:

Internal/external heat recovery

RENNERtronic Plus

Explosion protected

Special voltages

Special models





## Innovative and energy saving: heat recovery

When using screw compressors, a large amount of heat is generated in addition to the desired main product – compressed air. RENNER has developed a heat recovery system for you. With RENNER's heat recovery technology, you can recover up to 85% of the energy you have already used as heat in the form of hot air, industrial water or hot water. This makes ecological sense and saves a great deal of money!

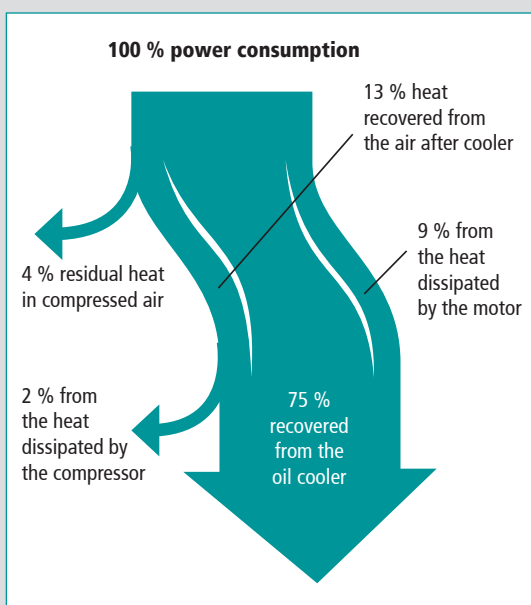
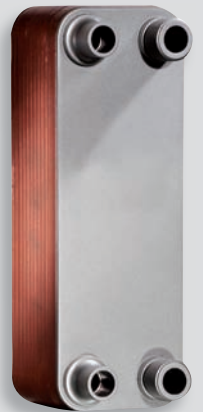
### Heat recovery with integrated plate heat exchanger

- for RENNER screw compressors 18.5 kW – 355 kW
- standard: temp input 15°C, output 65°C (industrial water) or temp input 35°C, output 65°C (heating)
- other temperature ranges available on request

**The integrated plate heat exchanger is for all compressors**

### Install, connect, benefit!

The external heat exchanger stands out with its easy installation - the connection to the existing water circuit can be carried out an engineer. No external energy is required for operation.



**We offer a retrofittable, external heat exchanger box for all compressors**

## RENNER – THE EXPERT IN SCREW COMPRESSORS




The family enterprise, established in 1994, comprises a motivated and successful team which engages itself exclusively with the development and manufacture of economical compressors. The structure and size of the company guarantees flexible decision-making and quick realisation, thereby ensuring optimal alignment of new developments to the needs of the market.

### THE RENNER MANUFACTURING AND SUPPLY PROGRAMME:

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

#### SCREW COMPRESSORS:

- from 3.0 to 355 kW – also for oil-free compressed air in breathing air quality
- water-injected screw compressors in the performance range of 18.5 to 85 kW 
- up to 40 bar: oil-free, e.g. for PET bottle manufacturing
- as compact units with compressed air tank, refrigerant drier and frequency control
- special version with plate heat exchanger – save energy and money!
- specially designed model, mobile/portable, as built-in unit, as per customer request
- for special applications: gas compression, operation of drilling apparatus, rail and special-purpose vehicles.

#### SCROLL COMPRESSORS:

- for oil-free compressed air from 1,5 – 22,0 kW



#### PISTON COMPRESSORS:

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

#### COMPRESSED AIR ACCESSORIES:

- compressed air filter, compressed air tank, refrigerant drier, adsorption drier, steam trap and oil/water separating systems.

Supplied by your RENNER distributor:

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