

**HPC** | Compressed  
Air Systems

## Rotary Screw Compressors SX Series

With the world-renowned SIGMA PROFILE 

Free air delivery from 0.26 to 0.81 m<sup>3</sup>/min, Pressure 5.5 - 15 bar



# SX Series

## SX – Compact and powerful

Today's users expect maximum availability and efficiency from their compressors, regardless of size. SX series rotary screw compressors meet all of these needs and more. Not only do they deliver more compressed air for less power consumption, but they also combine ease of use and maintenance with exceptional versatility and environmentally responsible design.

### More air for your money

Kaeser's engineers have significantly boosted the performance of SX series compressors compared to previous models. This impressive feat has been achieved both through airend optimisation and the minimisation of internal pressure losses. Therefore, depending on drive the power, these enhancements have resulted in a free air delivery increase of up to 14 percent.

### Energy-saving performance

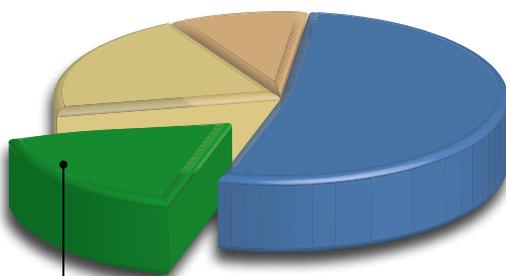
The efficiency of a machine depends on the total costs incurred throughout the equipment's entire service life. With compressors, energy costs account for the lion's share of total expenditure. Kaeser therefore designed its SX series compressors with optimum energy efficiency in mind. Refinements to the energy-saving **SIGMA PROFILE** airend have significantly increased the performance of these versatile compressors. The addition of the **SIGMA CONTROL 2** internal controller and Kaeser's unique cooling system have helped to push the boundaries of efficiency even further.

### Optimised design

The SX models all share logical and user-friendly design throughout. For example, the left-hand enclosure panel can be removed in a few simple steps and allows excellent visibility of the system's intelligently laid out components. Needless to say, the new SX series was designed to ensure best possible access to all service points. When closed, the sound-absorbing compressor enclosure keeps operational sound levels to a minimum thereby ensuring a pleasantly quiet work environment. In addition, the enclosure features four inlet openings for separate airflow cooling of the compressor, the motor and the switching cabinet and for compressor intake air. Last, but not least, SX series compressors are impressively compact, which makes them the perfect choice for applications where space is at a premium.

### Modular system concept

SX series compressors are available as standard versions, as so-called "T" models that are equipped with an integrated, thermally shielded refrigeration dryer and as "**AIRCENTER**" models that additionally include an underslung air receiver (see right). Kaeser's intelligent modular design therefore offers incredible flexibility.



Energy cost savings through system optimisation



- Compressed air system investment
- Maintenance costs
- Energy costs
- Potential energy cost savings

# Modular design – Dependable performance



Fig.: SX Aircenter



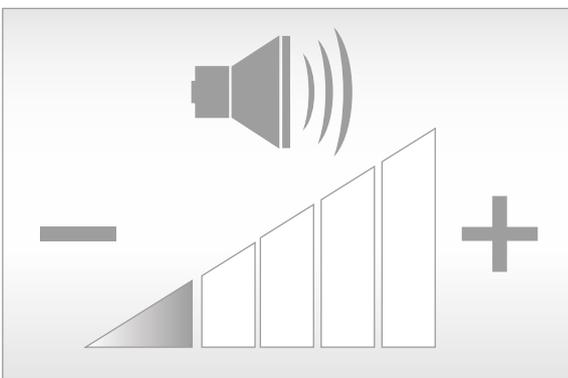
# SX Series

## The new standard for efficiency and quiet operation



### Sigma Profile airend

At the heart of every SX system lies a premium quality airend featuring Kaeser's SIGMA PROFILE rotors. Moreover, KAESER's product engineers have managed to enhance performance and efficiency still further. The use of IE2 electrical drive motors has also contributed to additional energy savings.



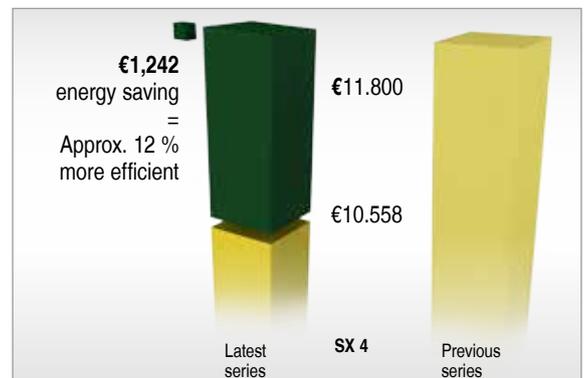
### Even quieter

The new cooling system combines optimum sound damping with enhanced cooling. Normal conversation can take place right next to the running compressor.



### SIGMA CONTROL 2

This advanced controller ensures efficient compressor system control and monitoring. Communication is made simple thanks to the generously sized display and a RFID reader. Multiple interfaces for exceptional flexibility. The SD card slot makes updates quick and easy.



### Enhanced efficiency

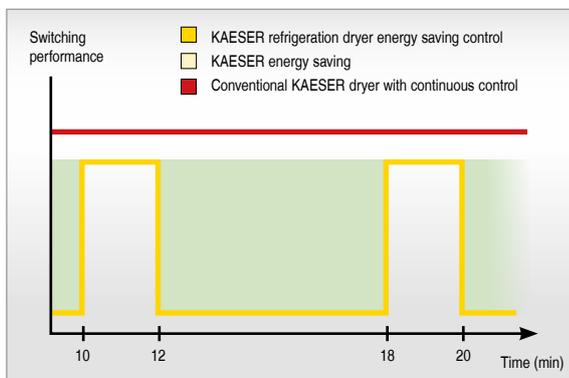
The new SX screw compressors are up to 12 percent more efficient than their predecessors. Based on an electricity cost of 0.20 €/kWh, this translates into energy-related savings of approximately €1,242 (for SX 4) over ten years, assuming 1,500 hours of operation annually.



Fig.: SX 8 T

# SX T series

## With integrated space-saving and efficient dryer



### Energy-saving control

With its innovative energy-saving control, the integrated refrigeration dryer ensures efficient operation at all times. The dryer is active only when compressed air actually needs to be dried: This approach therefore achieves the required compressed air quality with maximum efficiency.



### Automatic drain

The refrigeration dryer is equipped with an ECO-DRAIN automatic level-sensing condensate drain that operates without pressure loss. This both saves energy and considerably enhances the reliability of the compressed air supply.



### Efficient cooling

Kaeser's innovative cooling system uses a high efficiency dual flow fan and separate air flow channels for the compression air, cooling air for the air/fluid cooler and the motor. This system enables dependable operation in ambient temperatures of up to 45°C. The dryers in T-models feature separate cooling.



### Quality: Made in Germany

All rotary screw compressors and refrigeration dryers are built to Kaeser's renowned quality standards at the company's vertically integrated manufacturing facilities in Coburg and Gera, Germany.



Fig.: AIRCENTER 8

# SX AIRCENTER

## The compact and efficient compressed air package



### Connect and go

All this compact compressed air package needs is to be connected to the power supply and compressed air system. That's it – no further installation work is required.



### Long-lasting air receiver

All Kaeser air receivers are hot-dip galvanised both internally and externally in accordance with DIN EN ISO 1461, which means they last approximately 3 times longer than conventional models.



### Service-friendly design

The left-hand housing cover is easily removed to allow excellent accessibility to all service points. Moreover, all models are highly compact, making them ideal for environments where space is at a premium. Inspection glasses allow convenient inspection of fluid levels and drive belt tension whilst the unit is in operation.



### Excellent component access

All maintenance and service components are easily accessible, which significantly reduces the downtime associated with service and maintenance tasks. This helps to increase compressed air availability and minimises operating costs.

**KAESER**

The control panel features a central digital display showing the following information:

Label	0014	25.0
LASTLAF		
Teile	-	de
- Leit		
Lauf	0005b	0785b
Wartung	ic	1995b

Below the display, the text "KAESER" is printed. To the right of the display is a Wi-Fi symbol and the text "SIGMA CONTROL 2". A red emergency stop button is located below the control panel.

**SX 8**

**SIGMA**



## Equipment

### Complete unit

Ready-to-run, fully automatic, super-silenced, vibration damped, all panels powder coated. Suitable for use in ambient temperatures up to +45°C.

### Airend

Genuine KAESER rotary screw, single stage airend with Sigma Profile and cooling fluid injection for optimised rotor cooling.

### Electric motor

Premium efficiency IE2 German electric motor to IP 54.

### Fluid and air flow

Honeycomb air intake filter, pneumatic inlet and venting valves, cooling fluid separator tank with triple separation system, pressure relief valve, minimum pressure / check valve, thermostatic valve and fluid filter within the cooling fluid circuit, fluid / compressed air combination cooler.

### Refrigeration dryer (with T-version)

With electronically controlled condensate drain. Refrigerant compressor with energy-saving, cycling shutdown feature; linked to operational status of the compressor when inactive. Alternatively, continuous operation can be selected on site.

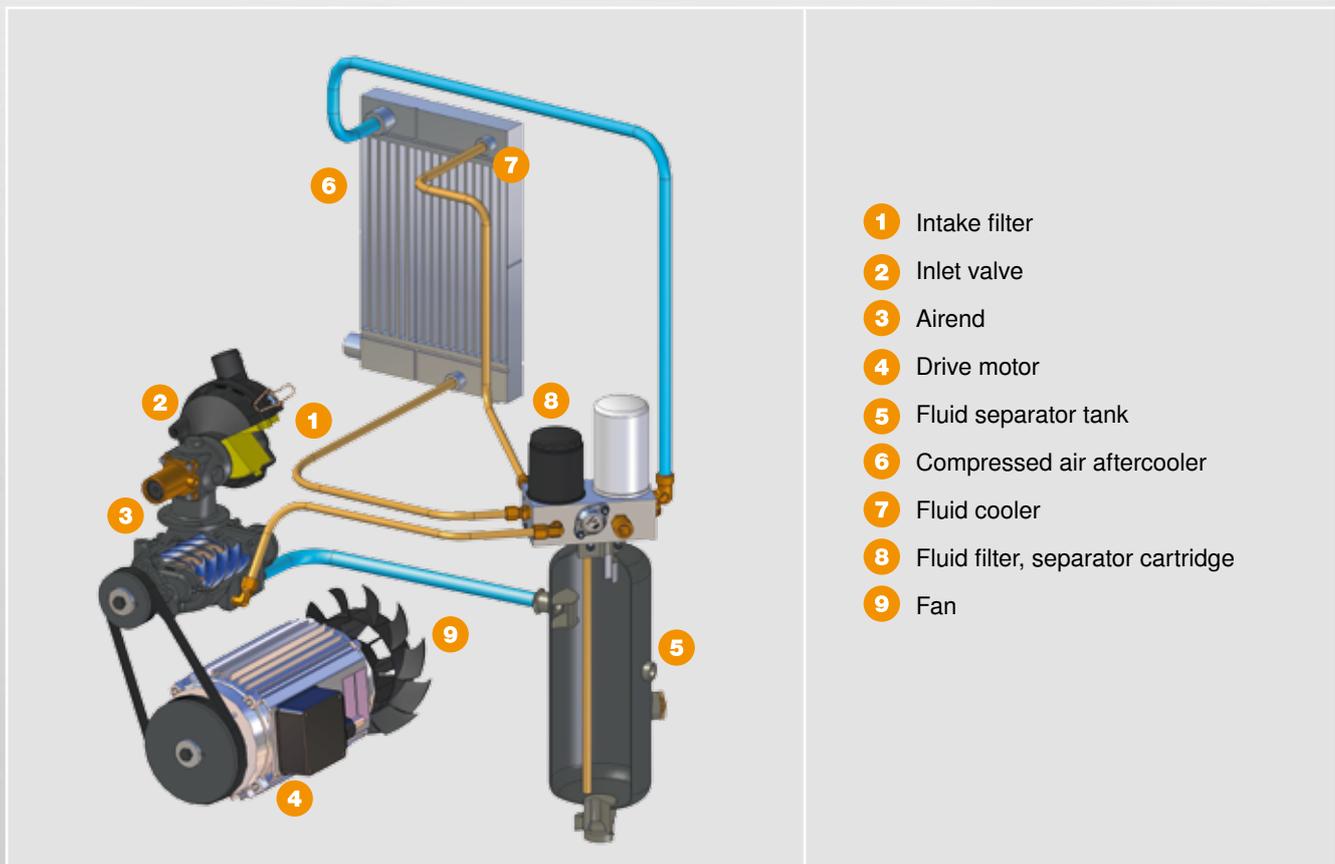
### Electrical components

Ventilated control cabinet to IP 54, automatic star-delta starter, overload relay, control transformer.

### SIGMA CONTROL 2

“Traffic light” LED indicators show operational status at a glance, plain text display, 30 selectable languages, soft-touch keys with icons, fully automated monitoring and control. Selection of Dual, Quadro, Vario and continuous control as standard. Interfaces: Ethernet; additional optional communication modules for: Profibus DP, Modbus, Profinet and Devicenet. SD-card slot for data-logging and updates. RFID reader, web server.

## General design

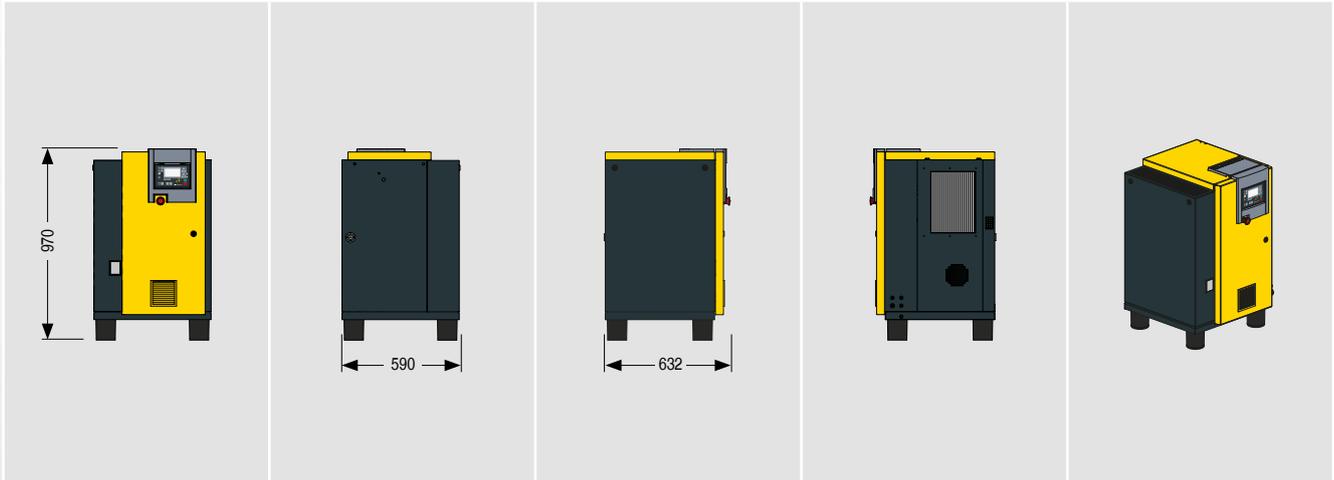


- 1 Intake filter
- 2 Inlet valve
- 3 Airend
- 4 Drive motor
- 5 Fluid separator tank
- 6 Compressed air aftercooler
- 7 Fluid cooler
- 8 Fluid filter, separator cartridge
- 9 Fan

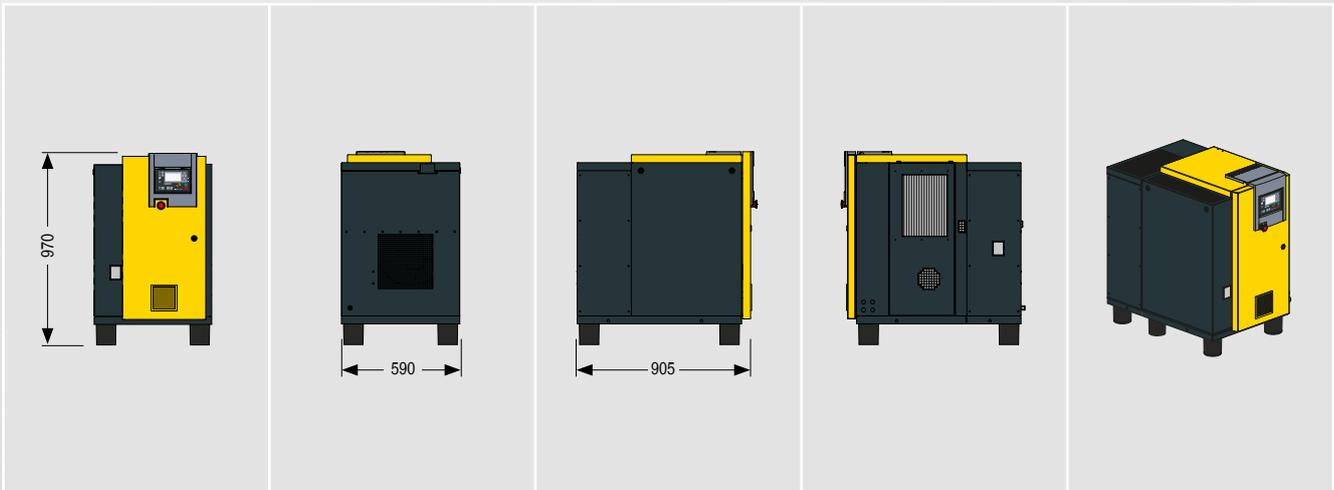
## Views

Front view	Rear view	View from left	View from right	3-D view
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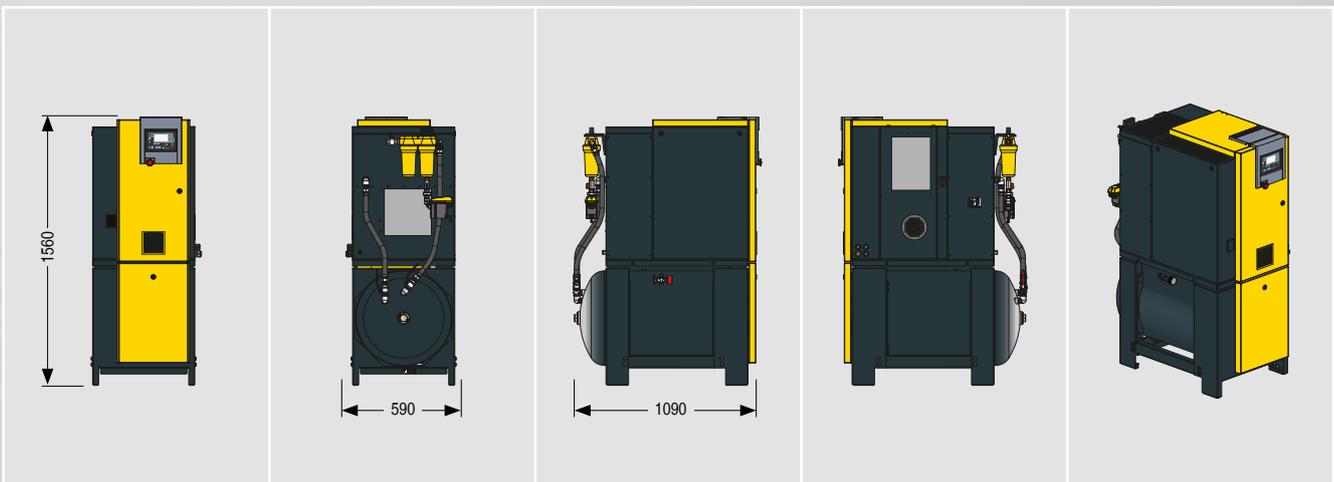
### Standard version



### T - Version with integrated refrigeration dryer



### AIRCENTER – With refrigeration dryer and compressed air receiver



## Technical Specifications

### Standard version

Model	Working pressure	FAD *) Complete package at working pressure	Max. working pressure	Rated motor power	Dimensions W x D x H	Air connection	Sound pressure level **)	Weight
	bar	m³/min	bar	kW	mm		dB(A)	kg
<b>SX 3</b>	7.5	0.34	8	2.2	590 x 632 x 970	G ¾	59	140
	10	0.26	11					
<b>SX 4</b>	7.5	0.45	8	3	590 x 632 x 970	G ¾	60	140
	10	0.36	11					
	13	0.26	15					
<b>SX 6</b>	7.5	0.60	8	4	590 x 632 x 970	G ¾	61	145
	10	0.48	11					
	13	0.37	15					
<b>SX 8</b>	7.5	0.80	8	5.5	590 x 632 x 970	G ¾	64	155
	10	0.67	11					
	13	0.54	15					

### AIRCENTER version with integrated refrigeration dryer (R 134a refrigerant and compressed air receiver)

Model	Working pressure	FAD*) overall machine at working pressure	Max. operating pressure	Rated motor power	Refrigeration dryer power consumption	Refrigeration dryer pressure drop	Air receiver volume	Dimensions W x D x H	Air connection	Sound pressure level **)	Weight
	bar	m³/min	bar	kW	kW	bar	l	mm		dB(A)	kg
<b>AIRCENTER 3</b>	7.5	0.34	8	2.2	0.18	0.2	200	590 x 1090 x 1560	G ¾	59	285
	10	0.26	11								
<b>AIRCENTER 4</b>	7.5	0.45	8	3	0.18	0.2	200	590 x 1090 x 1560	G ¾	60	285
	10	0.36	11								
	13	0.26	15								
<b>AIRCENTER 6</b>	7.5	0.60	8	4	0.26	0.2	200	590 x 1090 x 1560	G ¾	61	290
	10	0.48	11								
	13	0.37	15								
<b>AIRCENTER 8</b>	7.5	0.80	8	5.5	0.26	0.2	200	590 x 1090 x 1560	G ¾	64	300
	10	0.67	11								
	13	0.54	15								

\*) FAD in accordance with ISO 1217 : 2009, Annex C: absolute inlet pressure 1 bar (a), cooling- and air inlet temperature 20°C

\*\*) Noise pressure level as per ISO 2151 and the basic standard ISO 9614-2, tolerance: ± 3 dB(A)

**T version with integrated refrigeration dryer (R 134a refrigerant)**

Model	Working pressure	FAD *) Complete package at working pressure	Max. working pressure	Refrigeration dryer different- ial pressure	Dryer power consumption**)	Dimensions W x D x H	Air connection	Sound pressure level **)	Weight
	bar	m³/min	bar						
<b>SX 3 T</b>	7.5	0.34	8	0.2	0.18	590 x 905 x 970	G ¾	59	185
	10	0.26	11						
<b>SX 4 T</b>	7.5	0.45	8	0.2	0.18	590 x 905 x 970	G ¾	60	185
	10	0.36	11						
	13	0.26	15						
<b>SX 6 T</b>	7.5	0.60	8	0.2	0.26	590 x 905 x 970	G ¾	61	190
	10	0.48	11						
	13	0.37	15						
<b>SX 8 T</b>	7.5	0.80	8	0.2	0.26	590 x 905 x 970	G ¾	64	200
	10	0.67	11						
	13	0.54	15						

# KAESER – The world is our home

As one of the world's largest manufacturers of rotary screw compressors, KAESER KOMPRESSOREN is represented throughout the world by a comprehensive network of branches, subsidiary companies and authorised partners in over 100 countries.

With innovative products and services, KAESER KOMPRESSOREN's experienced consultants and engineers help customers to enhance their competitive edge by working in close partnership to develop progressive system concepts that continuously push the boundaries of performance and compressed air efficiency. Moreover, the decades of knowledge and expertise from this industry-leading system provider are made available to each and every customer via the KAESER group's global computer network.

These advantages, coupled with KAESER's worldwide service organisation, ensure that all products operate at the peak of their performance at all times and provide maximum availability.



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