

## Rotary Screw Compressors SXC »Compact« Series

With the world-renowned SIGMA PROFILE 

Free air delivery 0.26 to 0.80 m<sup>3</sup>/min, Pressure 8 – 11– 15 bar



## What do you expect from your compressed air system?

Compressed air should always be available in the correct volume and quality to meet your company's requirements. Condensate-free compressed air, tailored to the application, not only ensures maximum reliability, but also significantly reduces maintenance costs. At least two key components are required to achieve this: A compressor and a compressed air dryer. This combination is completed with the addition of a compressed air receiver. However, each of these units usually requires its own floor space, which is often at a premium.

Even if sufficient room is available, the principle of 'space is money' still applies. Therefore, the ideal solution would be a compact compressed air system that requires minimal floor space.

### The SXC solution

The SXC series from Kaeser Kompressoren provides the perfect space-saving solution: SXC systems incorporate a powerful rotary screw compressor, a high efficiency refrigeration air and an air receiver within a single compact unit, consequently eliminating the need for additional floor space. SXC units therefore fulfil all of your compressed air needs: they are efficient, quieter than quiet, require minimal maintenance, offer outstanding reliability, are simple to install and deliver the very best in air quality.

### Function diagram



## SXC — The all-in-one compressed air system ...

### Intelligent design

The turnkey SXC screw compressor range from Kaeser Kompressoren combines exceptional efficiency and cost-effective performance with super-quiet compressed air production, treatment and storage. Under the SXC's double-skinned rotation-sintered polyethylene enclosure hides a complete compressed air supply system: The innovative SXC is based on a unique tower concept which integrates a screw compressor, a refrigeration dryer and a compressed air receiver within a single compact unit. Using perfectly matched components and ensuring exceptional user-friendliness, the SXC is the ideal choice for users in the trade and craft sector who are looking for a dependable supply of quality compressed air.



EFF1  
motor

Made in Germany!

- 1 Air filter
- 2 Airend
- 3 Drive motor
- 4 Auto. belt tensioning system
- 5 Fluid separator
- 6 Cooler
- 7 Air receiver
- 8 ECO DRAIN condensate drain
- 9 Refrigeration dryer



### Energy saving SIGMA PROFILE

Each KAESER rotary screw-compressor airend uses SIGMA PROFILE rotors, specially developed by KAESER, that require approximately 10-20% less energy than conventional rotors with the same air delivery capacity. This consequently provides best in-class performance.



### SIGMA CONTROL basic

With its efficient start-stop control, the SIGMA CONTROL basic ensures optimised compressed air system performance at all times and constantly monitors the entire SXC package.



### Even quieter

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



### Efficient cooling

SXC units feature a clever cooling air system whereby the fan (controlled by the SIGMA CONTROL basic) is responsible for the fluid cooler. The drive motor has its own fan on the motor shaft. Continuous operation therefore poses no problem for the SXC.

### Powerful – Efficient – Quiet



As the most efficient way to achieve a given drive power, KAESER uses large, low speed rotary screw airends. This ensures that the specific power is always within the optimal range. SXC series units use a flexible V-belt drive system to precisely determine airend speed dependent upon the airend being used. Low airend speed also means that components are subjected to less wear and consequently last longer, whilst noise emissions are also significantly reduced in comparison with high speed airends. This is particularly important for compressors installed directly in work environments.

# SXC – The all-in-one solution...

## ... with energy-saving rotary screw compressor

There are also significant benefits to saving energy even with smaller rotary screw compressors. For example, a 20% reduction in energy consumption with a 5.5kW machine and 1000 operating hours per year translates into an annual saving of 1100kWh and to a 0.66 tonne reduction in CO<sub>2</sub> emissions.

## ... with refrigeration dryer

The thermally shielded refrigeration dryer is installed beneath the rotary screw compressor. At the heart of the system is a stainless steel plate heat exchanger with an integrated condensate separator. The condensate is removed without pressure loss via an electronic ECO DRAIN condensate drain. All of these features combine to ensure reliable and efficient compressed air drying.

## ... with integrated air receiver

SXC units are equipped with an internally coated compressed air receiver. The receiver performs 3 important functions: It cools the compressed air, pre-separates condensate and stores compressed air. Accumulating condensate is reliably and efficiently removed via an electronically controlled condensate drain.



EFF1 motor

Internal view:  
All-in one  
SXC compact compressed  
air system

## Maintenance friendly

All maintenance and service points are easily accessible once the SXC's removable enclosure is effortlessly lifted away. The electronic condensate drain can be inspected via a grille. Needless to say, the SXC is designed for maximum ease of maintenance.



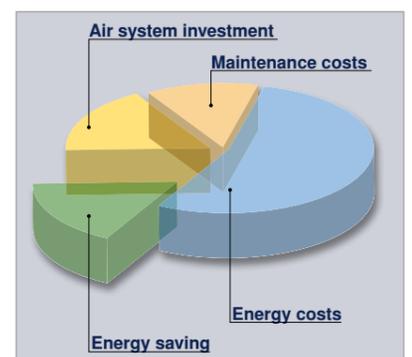
## Simple installation

SXC units are so simple to install – Just connect the compressor and refrigeration dryer to the power supply, hook up the condensate treatment system and there you have it: a ready-to-use supply of quality compressed air.



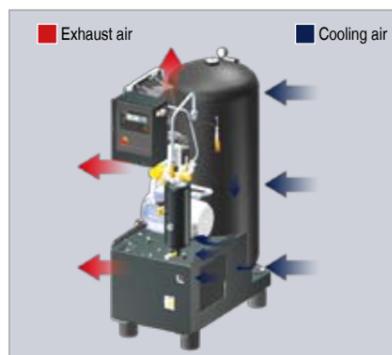
## Energy savings

Energy costs account for over 70 percent of total compressed air costs. This can amount to a significant sum even for smaller compressed air systems, which is why KAESER uses the very latest technology to ensure that every compressor provides best possible energy efficiency. Every kWh saved equates to a 0.6 kg reduction in CO<sub>2</sub> emissions (as per the energy mix in Germany).



## Efficient cooling

KAESER compressors are renowned for their innovative cooling systems and the SXC models are no exception, as they feature 3 fans for optimised cooling performance. One fan (with independent drive motor) cools the fluid in the rotary screw compressor and is controlled to switch on and off according to temperature via the SIGMA CONTROL basic. The second fan is installed on the main drive motor to ensure sufficient cooling for the motor, whilst the third fan provides cooling for the condenser on the refrigeration dryer. This advanced cooling system therefore enhances the SXC's dependability and helps guarantee consistent compressed air quality.



## Tailored control

The SIGMA CONTROL basic provides the perfect energy-saving solution for users who require a single compressor for their air supply, but who may also wish to expand the compressed air system in the future. Featuring fully automatic start-stop control and adjustable switching parameters, this user-friendly control system monitors key operational data such as network pressure, airtend temperature and direction of rotation to ensure optimised compressed air reliability and efficiency at all times.



## Equipment

### Complete unit

Ready for operation, fully automatic, super-silenced, vibration damped, double-walled rotation-sintered polyethylene enclosure.

### Sound insulation

Soundproof enclosure, anti-vibration mounts, double vibration damped.

### Airend



Genuine KAESER single-stage rotary screw airend with SIGMA PROFILE rotors and cooling-fluid injection for optimised rotor cooling.

### Electric motor

German made premium efficiency (Eff1) electric motor to IP 54 and insulation class F for additional reserve.

### V-belt drive

Maintenance-free elasticised V-belt. No further adjustment necessary.

### Fluid and air flow

Honeycombed dry-air filter, check valve at inlet, pneumatic vent valve, cooling fluid reservoir with dedicated separator cartridge, pressure release valve, minimum pressure/ check valve, micro-filter in cooling fluid system.

### Cooling

Air cooled; aluminium cooler for cooling fluid with separate fan motor, second fan on drive motor shaft.

### Air receiver

Internally coated, electronically controlled condensate drain.

### Electrical components

Control cabinet to IP 54, automatic star-delta starter (from 3kW); motor-overload protection; control transformer.

### Refrigeration dryer

Equipped with stainless steel plate heat exchangers, integrated condensate separator, electronically controlled condensate drain, insulated refrigerant loop.

### SIGMA CONTROL basic

- User-friendly with clear icons and large display
- Fully automatic start-stop control for compressor
- Monitoring of network pressure, airend temperature, direction of rotation, drive motor and compressor load
- Hours counter for service, on-load hours and compressor operating hours
- Adjustable service interval, selectable pressure and temperature (bar/psi/MPa/°C/°F)



- System set pressure individually adjustable
- Adjustable switching parameters
- Volts-free contact group alarm
- Electronic pressure transducer

## Professional planning

SXC compressed air system



Only properly designed air systems can meet the demands for air quality, availability and efficiency that are placed on a modern compressed air supply.

Therefore benefit from decades of compressed air engineering experience and let KAESER design your compressed air supply system.

## Dimensions



## Technical Specifications – SXC

Model	Working pressure bar	FAD *) Complete unit at operating pressure m³/min	Max. operating pressure bar	Rated motor power kW	Refrigeration dryer power consumption kW	Refrigerant	Pressure dew point °C	Dryer differential pressure bar	Air receiver l	Dimensions W x D x H mm	Sound level**) dB(A)	Weight kg
SXC 3	7.5 10	0.34 0.26	8 11	2.2	0.25	R 134 a	+6	0.2	215	620 x 980 x 1480	65	285
SXC 4	7.5 10 13	0.45 0.36 0.26	8 11 15	3.0	0.25	R 134 a	+6	0.2	215	620 x 980 x 1480	66	285
SXC 6	7.5 10 13	0.60 0.48 0.37	8 11 15	4.0	0.30	R 134 a	+6	0.2	215	620 x 980 x 1480	67	290
SXC 8	7.5 10 13	0.80 0.67 0.54	8 11 15	5.5	0.30	R 134 a	+6	0.2	215	620 x 980 x 1480	69	300

\*) Performance data to ISO 1217: 1996. Annex C; \*\*) Sound level to PN8NTC 2.3 at 1 m distance. free-field measurement

Choose the required grade of treatment according to your field of application:

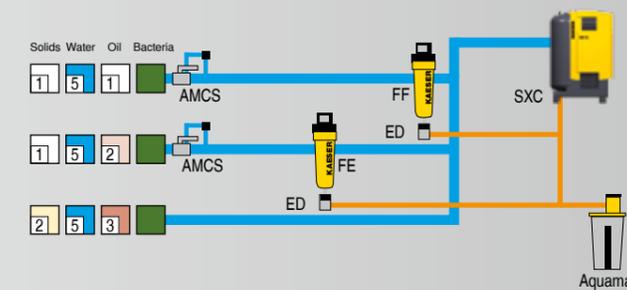
Air treatment using a refrigeration dryer (pressure dew point +3 °C)

Examples: Selection of treatment classes to ISO 8573-1 <sup>1)</sup>

Paint spraying, powder coating

Packaging, control and instrument air

General works air, high-grade sand blasting



### Explanation:

**ED = ECO DRAIN**  
Electronic level-controlled condensate drain  
**AMCS = Air-main charging system**

**FE = Micro-filter**  
Separates aerosol oil and solid particles  
**Aquamat = Condensate treatment system**

**FF = Micro-filter**  
Separates aerosol oil and solid particles

### Contaminants:

+	Solids	-
+	Water/condensate	-
+	Oil	-
+	Bacteria	-

### Degree of filtration:

Class ISO 8573-1	Solid particles <sup>1)</sup>		Humidity <sup>2)</sup>	Total oil content <sup>3)</sup>
	Max. particle size µm	Max. particle concentration mg/m³	Pressure dew point (x = Liquid water in g/m³)	mg/m³
0	e.g. Consult KAESER regarding pure air and cleanroom technology			
1	0.1	0.1	≤ -70	≤ 0.01
2	1	1	≤ -40	≤ 0.1
3	5	5	≤ -20	≤ 1
4	15	8	≤ +3	≤ 5
5	40	10	≤ +7	-
6	-	-	≤ +10	-
7	-	-	x ≤ 0.5	-
8	-	-	0.5 < x ≤ 5	-
9	-	-	5 < x ≤ 10	-

<sup>1)</sup> As per ISO 8573-1:1991  
(The specification for particle content is not measured as per ISO 8573-1:2001, as the limits defined therein for Class 1 are to be applied to 'Clean Rooms')  
<sup>2)</sup> As per ISO 8573-1:2001

# 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 60 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.

