

KAESER rotary screw compressors

Type: SX 6 (air cooled)

with the world-renowned SIGMA PROFILE

The **SX 6** consistently delivers precisely what users require in an energy-saving compressor: quiet and smooth operation, low maintenance requirement and high reliability. These key benefits are based on many innovative solutions, in such areas as airends with the highly efficient SIGMA PROFILE, cooling and ventilation, industrial PC controller and IE3 Premium Efficiency motor. All KAESER rotary screw compressors are subject to a comprehensive test run before leaving our factory.

Technical specifications (Performance parameters at **8.0 bar gauge working pressure**, relative to the entire system, including fans. In accordance with ISO 1217:2009 Annex C.)

Performance data:

Flow rate at 8.0 bar_(g)	0.60 m³/min
Power consumption of the entire system 8.0 bar_(g)	4.6 kW
Specific power	7.67 kW/m³/min
Maximum operating pressure	8.0 bar_(g)
Drive motor efficiency, full load	88.1 %
Drive motor efficiency class	IE3
Drive motor rated capacity	4.0 kW
Drive motor speed	2910 rpm
Drive motor protection rating	IP 54
Electrical connection	400 V / 3 Ph / 50 Hz
Compressed air discharge temperature above ambient temperature at +20 °C ambient temperature and 30 % rel. humidity	10 K
Sound pressure level	61 dB(A)

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Specifications are subject to change without notice

Technical specifications - Type: SX 6

Maximum useable hot air volume	1000 m ³ /h
Compressed air connection	G ¾"
Cooling oil charge	2.8 l
Compressor cooling oil grade	SIGMA FLUID MOL
Dimensions (L x B x H)	590 mm x 632 mm x 970 mm
Weight	145 kg

Available options

Connection to control system	YES
Partial-load control	NO
Adjustable machine mounts	NO
Compressor cooling oil grade	YES

Product information

You'll find images and additional details in the brochure at

<https://au.kaeser.com/products/rotary-screw-compressors/rotary-screw-compressors-with-fluid-cooling/with-belt-drive/>

Project planning note:

Please note that additional compressed air treatment components may be required for your proposal. Compressed air always contains a certain amount of solid matter/dust, moisture and residual oil content (hydrocarbons in aerosol / vapour form). Depending on the application, a specific treatment level may be required (see ISO 8573). We will be pleased to provide further advice and information.

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Decisive advantages of KAESER rotary screw compressors

KAESER airend with energy-saving SIGMA PROFILE

Every KAESER airend comes with energy-saving SIGMA PROFILE rotors. Meticulous manufacturing and calibrated precision anti-friction bearings guarantee a long service life and maximum reliability. Single-stage compression with cooling fluid injection ensures optimal cooling, lubrication and sealing of the rotors,

Cooling system with double-flow fans

The cooling system features an innovative double-flow fan (patent pending) that not only ensures exceptional performance, but which also keeps sound emissions to an absolute minimum. Separate air streams for compression air and incoming cooling air for the air/fluid cooler and motor ensure reserve capacity even at high ambient temperatures to 45 °C. Intake of motor cooling air and compression air directly from outside the enclosure delivers highly effective motor cooling whilst also boosting compression efficiency. Furthermore, sound levels are exceptionally low as the air flows through the cooling system at low speed.

Maintenance friendly

Clever design and logical component layout ensure maintenance tasks are simple to perform and therefore contribute to keeping these costs to an absolute minimum. Features include: honeycombed air filter, quick change oil filter, easy-access separator cartridge and long-life drive belts.

Excellent accessibility

All maintenance work can be carried out from one side of the unit. The left housing cover is easily removed to allow excellent component accessibility, but fluid levels can be visually inspected even without opening the enclosure, thanks to the observation window.

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SIGMA CONTROL 2 compressor controller

The control centre

The industrial-duty operator interface features a clear display panel and robust keys. All relevant information can be viewed at a glance. User-friendliness is further enhanced by the logical menu structure and the ability to display data in any one of 30 selectable languages.

Security with RFID

SIGMA CONTROL 2 provides a high level of security with its integrated RFID (Radio Frequency Identification) functionality. This technology not only ensures secure log-in for users and/or KAESER service engineers, but also safeguards the system against unauthorised changes or operation, in accordance with German operator liability provisions.

Communication

The SIGMA CONTROL 2 communicates internally with the compressor via inputs and outputs. The Ethernet interface fitted as standard enables integration into the SIGMA NETWORK. Network connectivity permits remote monitoring: the built-in web server can display the operating panel, menu structure, operating parameters and message history anywhere and at any time.

Updates and data storage

Software updates and operating parameters can be quickly uploaded and transferred via the convenient SD card slot. This minimises service costs whilst also enabling use of the SD card for (long-term) storage of key operational data.

"Prepared connection to process control" option

Optional (pluggable) bus communication modules (Profibus DP, Modbus TCP, Profinet, Devicenet) enable external communication with building and process control systems for remote control and remote monitoring of the compressor. Digital and analogue inputs and digital outputs that can be assigned using the control unit make it possible to connect external sensors and actuators.

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SIGMA CONTROL 2

Control systems

- Modular design comprising control unit and integrated inputs and outputs, power supply and web server. Designed for use with KAESER rotary screw compressor series SX - ASK.
- "Traffic-light" LEDs for at-a-glance operational status
- Fully automatic monitoring and control; Dual, Quadro and Vario control.
- Timer for compressor functions (on, off) or external outputs
- Baseload function for operation of two compressors
- Web server with remote display of operational data; clear text display, choice of 30 languages

Hardware

- Advanced processor hardware; all components designed for industrial operating conditions.
- Graphical display, LED indicators and tactile membrane keys; real-time clock, battery back-up
- Precision electronic pressure transducer

Control cabinet

- Dust and water-resistant, IP 54
- Input/output modules with clearly coded bushes for the signal sensor connection cable ¹⁾
- Terminal strip for additional floating contacts ¹⁾

Interfaces

- SD card slot for updates
- Adapter for communications modules ¹⁾
- USS bus for frequency converter; RFID reader, Ethernet

Approvals and certifications

- CE, cULus, EMV; marine certifications GL, ABS, LRS, DNV (available only if the "Prepared connection to process control" option is selected)

Note on 1): available only if the "Prepared connection to process control" option is selected