



# Rotary Screw Compressors

## SK Series

With the world-renowned SIGMA PROFILE

Flow rate 0.53 to 2.70 m<sup>3</sup>/min, Pressure 5.5 to 15 bar

# SK series

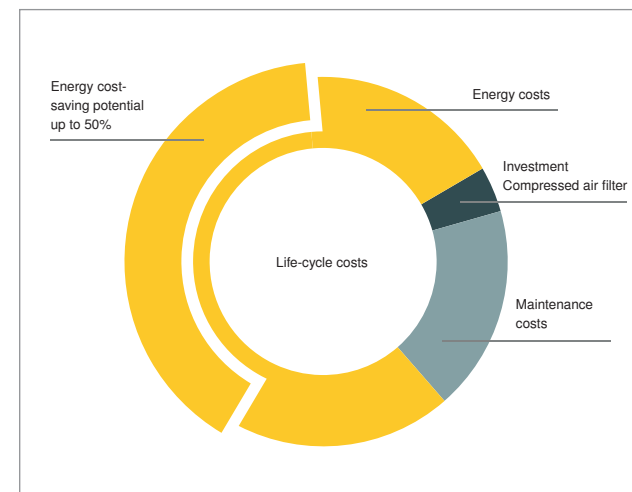
Discerning compressed air users expect maximum availability and efficiency, even from smaller compressors. It will come as no surprise therefore that KAESER's SK series rotary screw compressors go far beyond meeting these key expectations. Not only do they deliver more compressed air for less power consumption, 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 managed to significantly boost the performance of the new SK series compressors compared to previous models. This impressive feat has been achieved both through airtight optimisation and the minimisation of internal pressure losses.

## 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 SK series compressors with optimum energy efficiency in mind. Refinements to the energy-saving Sigma Profile airtight rotors and the use of premium efficiency IE3 motors have significantly contributed to the increased 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

All SK series models 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 SK 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. Moreover, with its three intake openings, the enclosure provides separate air flow for high efficiency cooling of the compressor, the drive motor and switching cabinet. Last, but not least, SK series compressors are impressively compact, which makes them the perfect choice for applications where space is at a premium.

## Modular system concept

SK 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 under-slung air receiver. KAESER's intelligent modular design therefore offers incredible flexibility. Moreover, all versions are available with an integrated frequency converter for infinitely variable speed control.

## Energy-efficiency: the essential requirement

Investment and service costs account for only a small part of a compressor's total life-cycle costs – energy accounts for the lion's share.

KAESER has been committed to minimising your energy costs for compressed air production for over 40 years. We also have the bigger picture in clear focus when it comes to service and maintenance, as well as maximum compressed air supply availability.

# Quiet, dependable performance



Image: SK 25

## SK series – Design is in the details



### SIGMA PROFILE air end

At the heart of every SK system lies a premium quality air end featuring KAESER's SIGMA PROFILE rotors. Operating at low speed, KAESER's air ends are equipped with flow-optimised rotors for superior efficiency.



### SIGMA CONTROL 2

The SIGMA CONTROL 2 ensures efficient control and system monitoring. The large display and RFID reader provide effective communication and maximum security. Multiple interfaces offer exceptional flexibility, whilst the SD card slot makes updates quick and easy.



### Maximum efficiency: IE3 motors

Needless to say, all KAESER SK series rotary screw compressors feature energy-saving, premium efficiency IE3 drive motors.



### Efficient cooling

KAESER's innovative cooling system uses a high efficiency dual flow fan and separate air flow channels for cooling of the motor, the fluid/compressed air cooler and the control cabinet. This not only achieves optimum cooling performance, low compressed air discharge temperatures and minimal sound levels, but also promotes efficient air compression.

# SK T (SFC) series – Also available with refrigeration dryer and variable speed control

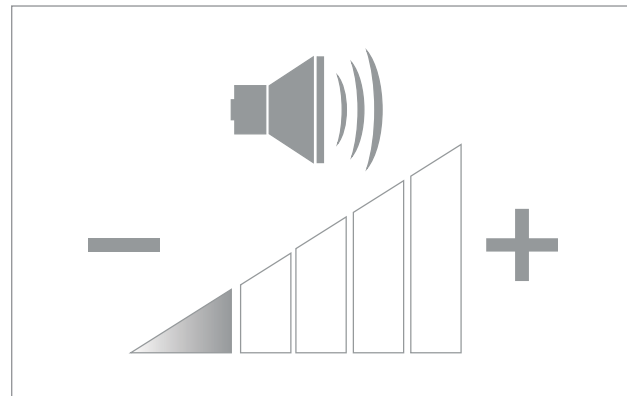


## SK with energy-saving dryer

The compressed air refrigeration dryer is installed in a separate enclosure to prevent exposure to heat from the compressor package. The automatic dryer shutdown feature further aids energy-efficient performance.

## Variable speed control also available

The use of variable speed control can provide definite advantages for specific applications, which is why this option is also available for SK series compressors. The frequency converter is integrated into the compressor system's control cabinet.



## Even quieter

The new cooling system provides outstanding cooling performance and enables optimum sound-proofing. Normal conversation can take place right next to the running compressor.

## Maintenance friendly

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.

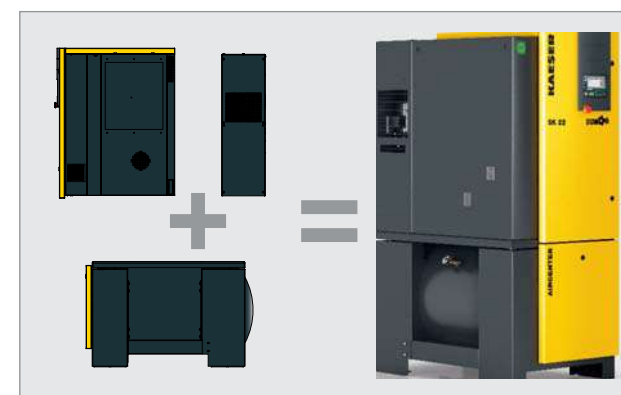


Image: SK 22 T



Image: AIRCENTER 22

## 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 distribution network. That's it!



### Durable air receiver

The 350-litre air receiver is especially designed for installation in AIRCENTER systems. All inner and outer surfaces are coated to provide excellent corrosion protection and to ensure long service life.



### Service-friendly design

The left-hand housing cover is easily removed to allow excellent accessibility to all service points. 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.

# 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.

## Rotary screw airend

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

## Electrical components

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

## 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 electronic 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.

## Electric motor

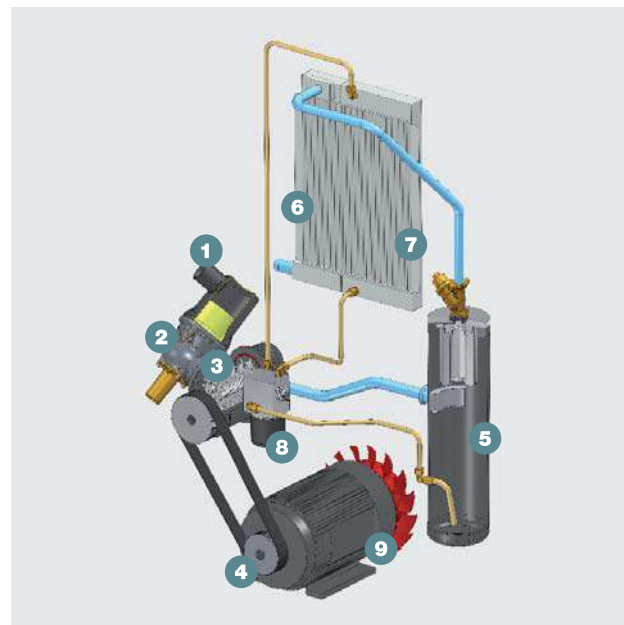
Premium efficiency IE3 electric motor of quality German manufacture, IP 55.

## 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.

*SK series rotary screw compressors also optionally available with SIGMA CONTROL BASIC.*

# How it works



- (1) Inlet filter
- (2) Intake valve
- (3) Airend
- (4) Drive motor
- (5) Fluid separator tank
- (6) Compressed air aftercooler
- (7) Fluid cooler
- (8) Fluid filter
- (9) Dual-flow fan

# Technical specifications

Model	Working pressure	Flow rate <sup>1)</sup>	Max. operating pressure	Rated motor power	Refrigeration dryer power consumption	Air receiver volume	Pressure dew point	Dimensions W x D x H	Air connection comp. air	Sound pressure level <sup>2)</sup>	Mass
	bar	m <sup>3</sup> /min	bar	kW	kW	l	°C	mm		dB(A)	kg

### Standard version

SK 22	7.5	2.00	8	11	-	-	-	750 x 895 x 1260	G 1	66	312
	10	1.68	11								
	13	1.32	15								
SK 25	7.5	2.50	8	15	-	-	-	750 x 895 x 1260	G 1	67	320
	10	2.11	11								
	13	1.72	15								

### T – Version with integrated refrigeration dryer (Refrigerant R-134a)

SK 22 T	7.5	2.00	8	11	0.41	-	+3	750 x 1240 x 1260	G 1	66	387
	10	1.68	11								
	13	1.32	15								
SK 25 T	7.5	2.50	8	15	0.41	-	+3	750 x 1240 x 1260	G 1	67	395
	10	2.11	11								
	13	1.72	15								

### SFC – Version with variable speed drive

SK 22 SFC	7.5	0.62 - 1.98	8	11	-	-	-	750 x 895 x 1260	G 1	67	329
	10	0.63 - 1.67	11								
	13	0.57 - 1.37	15								
SK 25 SFC	7.5	0.81 - 2.55	8	15	-	-	-	750 x 895 x 1260	G 1	68	337
	10	0.84 - 2.25	11								
	13	0.83 - 1.90	15								

### T SFC – Version with variable speed drive and integrated refrigeration dryer

SK 22 T SFC	7.5	0.62 - 1.98	8	11	0.41	-	+3	750 x 1240 x 1260	G 1	67	404
	10	0.63 - 1.67	11								
	13	0.57 - 1.37	15								
SK 25 T SFC	7.5	0.81 - 2.55	8	15	0.41	-	+3	750 x 1240 x 1260	G 1	68	412
	10	0.84 - 2.25	11								
	13	0.83 - 1.90	15								

### AIRCENTER – Standard version

AIRCENTER 22	7.5	2.00	8	11	0.41	350	+3	750 x 1335 x 1880	G 1	66	579
	10	1.68	11								
	13	1.32	15								
AIRCENTER 25	7.5	2.50	8	15	0.41	350	+3	750 x 1335 x 1880	G 1	67	587
	10	2.11	11								
	13	1.72	15								

### AIRCENTER SFC – Version with variable speed drive

AIRCENTER 22 SFC	7.5	0.62 - 1.98	8	11	0.41	350	+3	750 x 1335 x 1880	G 1	67	596
	10	0.63 - 1.67	11								
	13	0.57 - 1.37	15								
AIRCENTER 25 SFC	7.5	0.81 - 2.55	8	15	0.41	350	+3	750 x 1335 x 1880	G 1	68	604
	10	0.84 - 2.25	11								
	13	0.83 - 1.90	15								

<sup>1)</sup> Flow rate complete system as per ISO 1217: 2009 Annex C: Absolute inlet pressure 1 bar (a), cooling and air inlet temperature 20 °C

<sup>2)</sup> Sound pressure level as per ISO 2151 and basic standard ISO 9614-2, tolerance: ± 3 dB (A)

# The world is our home

As one of the world's largest compressed air systems providers and compressor manufacturers, KAESER KOMPRESSOREN is represented throughout the world by a comprehensive network of branches, subsidiary companies and authorised partners.

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 every product operates at the peak of its performance at all times and provides maximum availability.



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