

Screw Compressors

SM SERIES

Capacities from: 16 to 54 cfm

Pressures from: 80 to 217 psig



Rotary Screw Compressor

Maximum Reliability and Efficiency

For years, customers have depended on Kaeser for reliable equipment and complete compressed air system solutions. Our research and development team continues to produce industry-leading compressor technology to meet virtually any compressed air need. The new SM series rotary screw compressors are no exception.

These new 7.5, 10, and 15 hp models combine our optimized Sigma Profile™ single-stage airend, high-efficiency motors, heavy-duty construction and simple modern controls into a compressor built for years of reliable service. A new cabinet design and component layout reduce noise levels and footprint while offering easier access during preventive maintenance.

Manufactured in a rigorous quality control program, Kaeser products are made to provide years of reliable service in the widest range of applications.

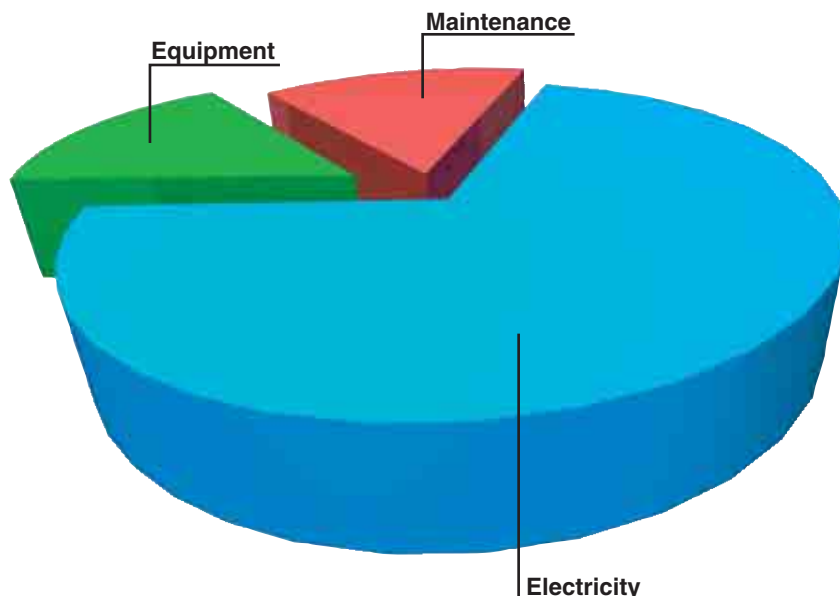
70% of Your Long Term Compressor Cost is Electricity

Analyze the total cost of a compressed air system and you'll realize that power cost is significant. In just one year it could exceed the cost of the compressor itself. Over a period of ten years, energy may add up to 70% of your overall costs for buying, operating, and maintaining an air system.

That's why it is important to consider energy efficiency when evaluating a new compressor.

Kaeser's proprietary Sigma Profile compresses air efficiently. It delivers up to 20% more cfm per horsepower than other airend designs. Combined with high-efficiency motors and our unique automatic belt tensioning device, this results in a compressor designed to achieve significant savings.

Every Kaeser product demonstrates our commitment to providing unrivaled quality and performance at the lowest overall cost.



1 Sigma Control™ Basic

A simple and reliable interface offers convenient pressure control and system monitoring with status displays and service indicators. Displays include discharge pressure and temperature, load and service hours as well as fault indicators.

2 Sigma Profile Airend



Our power-saving, proprietary airend design delivers pressures up to 217 psig. Kaeser uses a newly designed airend

for this SM series. It is precision-machined to close tolerances and optimized in size and profile to match the low airend speeds with their best specific performance, up to 20% less energy than comparable airends.

3 TEFC Motor with Reduced Voltage Starter



High-efficiency, totally enclosed, fan cooled (TEFC) motors with Class F insulation are standard for long life in harsh envi-

ronments. Tri-voltage 208-230/460 or 575 V, 3-phase, 60 Hz is standard. Other voltages are available. E Pact compliant. Magnetic Wye-Delta reduced voltage starters ensure low starting current and smooth acceleration.



4 Belt Drive with Automatic Tensioning



A new ribbed single belt drive efficiently transfers power from motor to airend. Our unique automatic tensioning device maintains proper tension to maximize energy efficiency, prolong belt life and simplify routine maintenance. The belt tension can easily be verified through a window in the service panel.

5 Efficient Separator System



A three-stage separator (ASME or CRN) combines centrifugal action and a 2 stage coalescing filter to reduce fluid carry over to 2 ppm or less. Quick release fittings, drain and fill ports are arranged

for fast, and easy fluid changes from sump and cooler without any pumping device. The easy-to-read fluid level indicator can be checked without opening or stopping the compressor.

6 Removable Panel

Single removable service panel provides full access to all components for easy maintenance.

Double-flow Cooling Fan

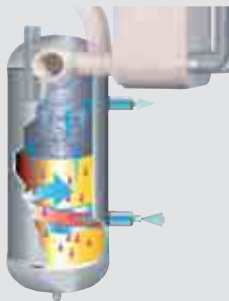


Patent-pending double-flow fan design increases air flow through the unit while reducing overall power requirements and sound levels. Sickle-shaped fan

blades with foam-covered air guiding ring.

Integral Refrigerated Dryer Option

SM "T" models have integral refrigerated dryers, moisture separators and electronic Eco-Drains. The dryer uses CFC-free R134a refrigerant and is designed to achieve a 38°F pressure dew point. The dryer is controlled through the Sigma Control Basic and requires no additional electrical hook up.



Heat Exchanger and Moisture Separator

The dryer features plate-type heat exchangers and moisture separator, with stainless steel construction for long life.



Condensate Drain


The Eco-Drain has a robust aluminum housing and patented pilot air-controlled valve technology to ensure many years of reliable service even when subjected to harsh condensate. These drains are controlled by reliable capacitance sensors. These energy-saving drains remove condensate - but not valuable compressed air.

Optimized Air Flow Design

Air is drawn into separate cooling zones for the drive motor and coolers. This "split cooling" design eliminates pre-heating, increasing cooling efficiency without increasing power consumption. Cooler temperatures also promote longer lubricant and motor life. Cooling air is exhausted through a single port at the top of the cabinet. Ducting this air enables heat recovery and further reduces noise.

Air for compression enters through a separate grill on the right side of the cabinet. It is then filtered through a two-stage air intake filter. This filter protects the air end and extends fluid change intervals.



 *Fresh cooling air*

 *Recirculated air*

 *Exhaust air*

The SM unit can be installed in a corner and it will still provide easy access for maintenance while allowing for proper cooling air flow.

Enclosure

Our superior cabinet design reduces noise and footprint while offering easy access for service. A heavy-duty metal enclosure with a durable powder-coated finish keeps noise in but dirt and dust out. Thick sound insulation keeps noise levels as low as 66 dB(A), up to 10 dB(A) quieter than comparable units.

All maintenance items are accessible behind one easily removed locking panel. The fluid level indicator and belt tension are visible through a conveniently placed window in the service side panel.

Internal and external vibration isolators eliminate stress on piping and wire connections, further increasing reliability.

Electrical components are housed in a spacious, ventilated control cabinet. Wiring is neatly arranged and terminals are clearly identified.

Fluid Cooling System

All units are filled with Kaeser Premium Fluid to cool, clean, and lubricate the air end. A thermostatically controlled combination valve ensures perfect fluid temperature regulation and incorporates a cooler by-pass and fluid filter. Main air and fluid lines are made of rigid pipe with flexible pipe connections. The 10 micron spin-on fluid filter extends fluid life and protects the air end. This filter is easy to change and the fluid level is easily checked through a window while the compressor is running.

Ease of Maintenance

Many features make our SM models easy to service, including:

- Easy access from one side
- Automatic belt tensioning device
- Quick fluid change system
- Side panel windows to view fluid level indicator and belt tension
- Spin-on 10 micron fluid filter
- Cartridge style 4 micron inlet filter
- Cleanable filter mat

Other Options:

- An optional five year warranty is available.
- Some models available with Sigma Frequency Control (variable speed drive)



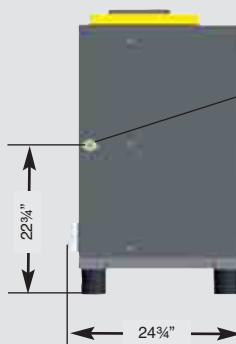
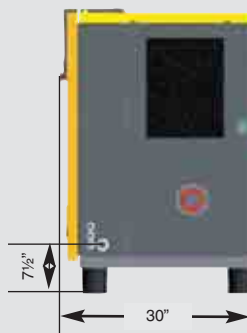
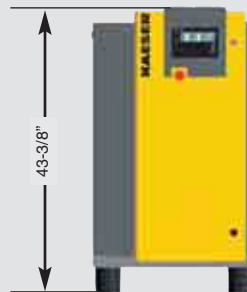
SFC 8 (SM unit with optional Sigma Frequency Control).

- Programming Module - enables the Sigma Control™ Basic to be connected to a supervisory compressor controller. Simply plug in the module and the SM can be controlled, along with other compressors, by the Sigma Air Manager or other master controller.
- PC-based Sigma Control system with Intel™ processor and real-time operating system. Monitors all critical compressor and control system functions and compressor maintenance items. Message history offers easy troubleshooting and record keeping. Integrated database offers plain text display in up to 30 languages and has RS 232, RS 485, and Profibus ports built-in with open architecture for integration into master control systems.

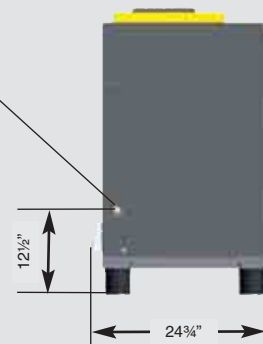
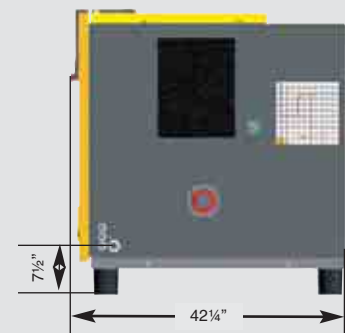
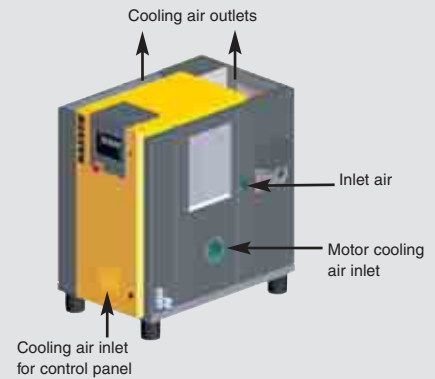
Dimensions

Dimensions are for reference only — please contact Kaeser for dimensional drawings. For SFC option dimensions, please see SFC literature.

Standard Units (or with optional SFC)



With Optional Dryer (with or without SFC)



Compressed Air System Design

Engineering expertise

With decades of combined experience in compressed air systems and design, our entire team of qualified engineers is always at your service. For specialized systems or unique requirements, Kaeser's highly trained engineers provide expert applications assistance. From complex installations and challenging environments to facilities with limited space, Kaeser can design and lay out a system to meet the specified requirements for performance and reliability.

Using specialized tools such as our Power Cost Analysis and Air Demand Analysis, we can provide an accurate assessment of the existing installation as well as a contrasting view of the proposed system's performance.

Kaeser uses state-of-the-art CAD systems to lay out the proposed system and produce traditional two- and three-dimensional drawings for project execution. Variables such as distance, diameters, equipment order, location, accessories and connections can be reviewed and modified, if necessary, prior to installation.

Specifications

Model	Operating Pressure (psig)	Capacity at Operating Pressure (cfm)	Motor (hp)	Standard Units Air-cooled, Sound-proofed	
				Dimensions L x W x H (in)	Weight (lb)
SM 7.5 SM 7.5 T	125	28	7.5	24 ³ / ₄ x 30 x 43 ³ / ₈ 24 ³ / ₄ x 42 ¹ / ₄ x 43 ³ / ₈	441 606
	160	23			
	217	16			
SM 10 SM 10 T	125	42	10	24 ³ / ₄ x 30 x 43 ³ / ₈ 24 ³ / ₄ x 42 ¹ / ₄ x 43 ³ / ₈	463 628
	160	35			
	217	27			
SM 15 SM 15 T	125	53	15	24 ³ / ₄ x 30 x 43 ³ / ₈ 24 ³ / ₄ x 42 ¹ / ₄ x 43 ³ / ₈	485 650
	160	44			
	217	34			

Standard units are air-cooled and sound proofed.
For details on our SFC 8 model, please refer to our SFC literature.
Specifications are subject to change without notice.



**KAESER
COMPRESSORS**

Built for a lifetime.™

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Certified Management Systems



The Air Systems Specialist

With over 85 years of experience, Kaeser is the air systems specialist. Our extensive 100,000 square foot facility allows us to provide unequalled product availability. With service centers nationwide and our 24-hour emergency parts guarantee, Kaeser customers can rely on the best after-sales support in the industry. Kaeser stands committed to providing the highest quality air system for your specific compressed air needs.

