KAESER COMPRESSORS

Built for a lifetime.™

Screw Compressors

ASD Series

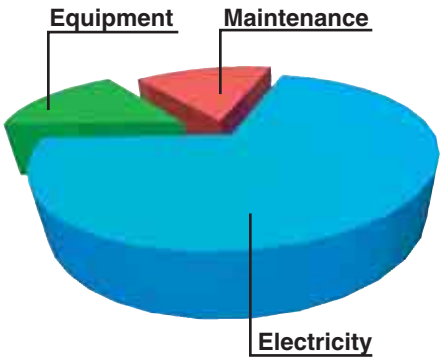
Capacities from: 72 to 193 cfm
Pressures from: 80 to 217 psig

Direct Drive Rotary Screw Compressor

Maximum Efficiency and Reliability

For years, customers have relied on Kaeser for energy efficient 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 application requirement. The new ASD series rotary screw compressor is no exception.

Kaeser's new ASD compressors combine our proprietary optimized Sigma Profile airend and Sigma Control system with the latest one-to-one drive technology. They also incorporate optimized designs for reducing maintenance, attenuating noise, and providing superior aftercooling. Manufactured according to strict ISO 9001 quality standards and designed for easy maintenance, our compressors provide exceptional energy savings and years of reliable service.

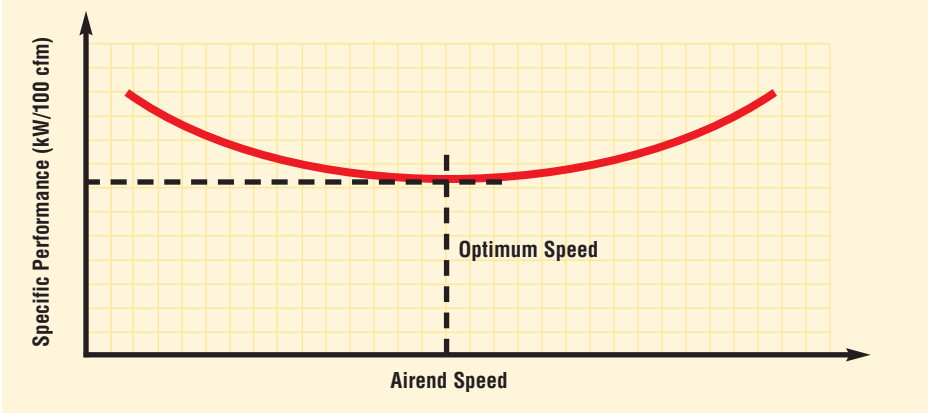


70% of Your Long Term Compressor Cost is Electricity

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 price of the compressor itself. Over a period of ten years, this could consume 70% of your overall air system costs. That's why it is important to investigate energy efficiency when considering a new compressor.

Kaeser's proprietary Sigma Profile compresses air efficiently. It delivers up to 20% more cfm per horsepower than other airend designs.

A Perfect Match



1 Inlet Filter

We protect our compressors with a two-stage,

4 micron air intake filter. This extends airend life and fluid change intervals. The filter may be cleaned several times before replacement and is easily serviced with no tools required.

2 Efficient Separator System

ASD packages are fitted with an optimized,

high-efficiency separation system. Most of the cooling fluid is initially separated from the air by centrifugal force in the separator tank. Any remaining fluid is separated by a 2-stage filter in the separator cartridge. This *triple* action doubles the cartridge service life and reduces fluid carry over to 2 ppm or less. The fluid level is quickly verified by the easy-to-read level indicator.

3 Optimized Airend for Increased Efficiency

Kaeser has selected oversized airends specifically matched to produce the required

output in flow and pressure. Compared to compressors using small, high speed gear-driven airends, the ASD one-to-one drive provides triple savings: no-loss power transmission, improved power consumption, and reduced maintenance and related downtime costs.

4 One-to-One Direct Drive

In ASD packages, one-to-one drive reduces the number of components needed compared to a gear drive unit thus increasing reliability and service life. Some compressors are called direct drive but are really gear driven units. In Kaeser's ASD package, the motor is directly connected to the airend with a maintenance-free coupling, providing maximum transmission efficiency. The airend and motor are connected by a casting which is doweled and pinned to assure perfect alignment.

5 Motor

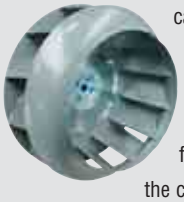
EPAct compliant, high-efficiency, TEFC electric drive motors with class F insulation are offered, tri-voltage 208-230/460 or 575 V, 3-phase, 60 Hz. Other voltages are available. Easily accessible grease fittings make maintenance a breeze.

Airend RPM = Motor RPM

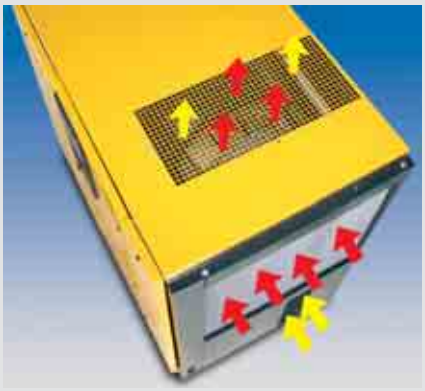
One-to-One Direct Drive

6 Improved Cooling and Air Flow Design

To increase operational reliability and reduce maintenance costs, the air and fluid coolers are conveniently located on the outside of the unit so that any buildup of airborne dirt and debris can be easily monitored and removed. Cooling air (shown by red arrows below) is drawn directly from ambient air through the coolers by a powerful yet super quiet radial fan and exits through the top of the cabinet. This design prevents preheating and provides optimum cooling. It also provides higher static pressure than conventional axial fans and consumes significantly less power.



Cooling air for the motor and cabinet (shown by yellow arrows) is also drawn directly from ambient air and is exhausted through the same top opening. This, along with our higher static pressure fan facilitates ducting for heat recovery and energy management. The electrical cabinet is cooled by forced ventilation supplied by a small vent fan.



Air for compression enters separately through two vents on either side of the cabinet. This ensures the coolest possible inlet temperatures and most efficient compression. Each opening is large enough for all needed inlet airflow, greatly reducing the potential for pressure drop across the inlet.

Extremely Quiet

While the radial cooling fan and one-to-one drive greatly reduce noise levels, our new "split cooling air flow" design provides further noise reduction without cooling efficiency losses. With noise levels as low as 66 dB(A), the ASD is nearly 10 dB(A) quieter than comparable compressors.

7 Sigma Control

Developed by Kaeser in conjunction with Siemens AG, this patented compressor control features an industrial based PC with an Intel® microprocessor inside. Five different compressor control configurations are available to precisely match compressor performance to air demand and increase energy savings.

With Sigma Control and Kaeser's proprietary software, compressor systems can be monitored and adjusted from any location worldwide. Sigma Control also features extensive capabilities for maintenance trending and air demand tracking.

Available Options

Most units are available with optional refrigerated dryer and/or SFC variable frequency drive.

SFC Option*

- Superior part-load efficiency
- Stable system pressure
- Siemens Master Drive system technology for reliability and efficiency
- Drive includes EMI filter, contactor for galvanic separation and a line reactor

- Drive cabinet cooling fans

*Not available on ASD 40 model

Optional SFC shown

Refrigerated Dryer Option

- Single-point hook-up integrated dryer
- CFC-free R134a refrigerant
- 38°F pressure dew point
- Moisture separators and Eco-Drains
- Completely piped and ready for installation
- Stainless steel plate-type heat exchangers

Equipment

Compressor

Single-stage, flooded rotary screw airend with the power-saving, proprietary Sigma Profile delivers pressures up to 217 psig. Pneumatic inlet and vent valves are included.

Electric Motor

TEFC, high efficiency, 208-230/460 or 575 V, 3-phase, 60 Hz, 3600 (some models 1800) rpm, class F insulation, and EPAct compliant. Other voltages are available.

Starter

Magnetic Wye-Delta reduced-voltage starter ensures low starting current and smooth acceleration.

Drive

Direct drive with maintenance-free coupling provides maximum transmission efficiency.

Sigma Control System

Sigma Control is a modern, compact, PC-based control system with Intel™ processor and real-time operating system. Sigma Control monitors all critical compressor and control system functions and compressor maintenance items. History memory offers easy troubleshooting and record keeping. Integrated database offers plain text display in up to 20 languages. Sigma Control has three communication ports built-in (RS 232, RS 485, Profibus) with open architecture for integration into master control systems.

Cooling System

- Three separate cooling air inlet zones for the aftercooler, compressor, and drive motor ensure optimum cooling. Drawing ambient air across the coolers and motor through separate zones avoids pre-heating and results in lower approach temperatures, longer lubricant life, and cooler motor temperatures.
- Radial cooling fan reduces package noise and produces greater static pressure across the coolers.
- High-efficiency coolers are included.
- Combination valve incorporates a thermostatically controlled valve, cooler by-pass, and micro fluid filter. The thermostatically controlled valve ensures perfect fluid temperature regulation. The micro fluid filter utilizes a spin-on cartridge.
- All units are filled with Kaeser Premium Fluid to cool, clean, and lubricate airend.
- Combined reservoir and separator tank with 3-stage separation system ensures minimal fluid carry over of 2 ppm or less (by weight). Quick change devices on the separator and cooler allow complete, fast, and easy fluid changes.
- ASME or CRN separator tank is equipped with quick disconnect fittings for manual verification of separator element contamination.
- Main air lines are made of rigid pipe and incorporate flexible pipe connections.
- Standard units are air-cooled, optional water-cooling is available.

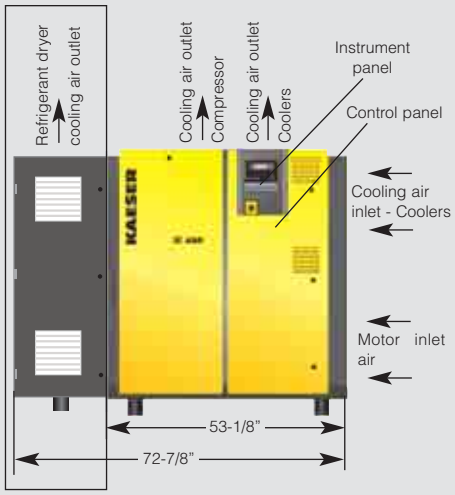
Enclosure

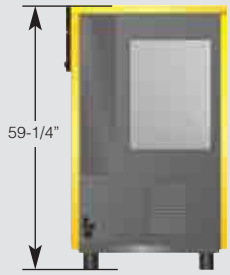
Compact unit is soundproofed by a sheet metal enclosure with mineral wool and plastic liners. Enclosure features a durable powder-coated finish. Compressor is mounted on base frame with a solid steel floor and vibration isolation mounts. Additional vibration isolation for airend, motor, and separator tank is standard.

Dimensions

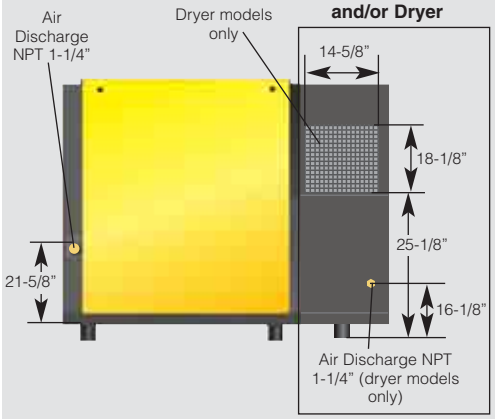
Dimensions are for reference only — please contact Kaeser for dimensional drawings.

Optional SFC and/or Dryer





Optional SFC and/or Dryer



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.

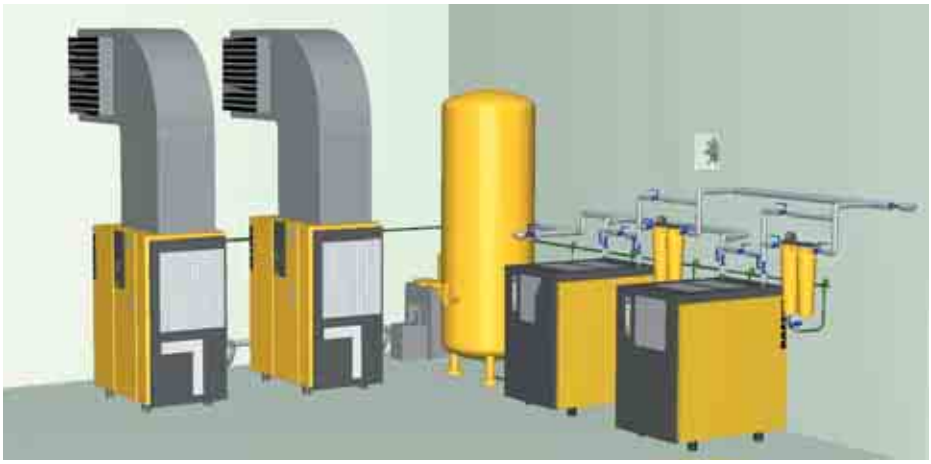
Kaeser uses state-of-the-art CAD systems to lay out the proposed system and produce traditional two- and three-dimensional drawings for project execution. Variables such as distance, diameters, equipment order, location, accessories and connections can be reviewed and modified, if necessary, prior to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

ASD Series - Technical Specifications for Standard Units*

Model	Pressure Range (psig)	Capacity (cfm) (1)	Rated Motor Power (hp)	Dimensions (in.)	Noise Level dB(A)(2)	Weight (lb.) (3)
ASD 25	125 175 217	115 92 72	25	53 1/8 x 36 1/4 x 59 1/4	66	1280
ASD 30	125 175 217	134 113 90	30	53 1/8 x 36 1/4 x 59 1/4	67	1440
ASD 40S	125 175 217	166 129 110	40	53 1/8 x 36 1/4 x 59 1/4	67	1470
ASD 40	125 175 217	191 159 125	40	53 1/8 x 36 1/4 x 59 1/4	69	1480

(1) Performance rated in accordance with CAGI/PNEUROP PN2CPTC2 test code. (2) Measured at 3 feet according to CAGI. (3) Weights may vary slightly depending on airend model.
NOTE: Other pressures available from 80 to 217 psig.
* For units with SFC and/or dryer, please contact your local authorized Kaeser distributor.

Specifications are subject to change without notice.



KAESER COMPRESSORS

Built for a lifetime.™

Corporate Headquarters:
P.O. Box 946
Fredericksburg, Virginia 22404
Phone 540-898-5500
Fax 540-898-5520
www.kaeser.com

Certified Management Systems
ISO 9001:2000 Quality 14001:2004 Environmental

Member of Compressed Air and Gas Institute CAGI
www.cagi.org

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 unequaled 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.