KAESER COMPRESSORS

Built for a lifetime.™

Screw Compressors

BSD Series

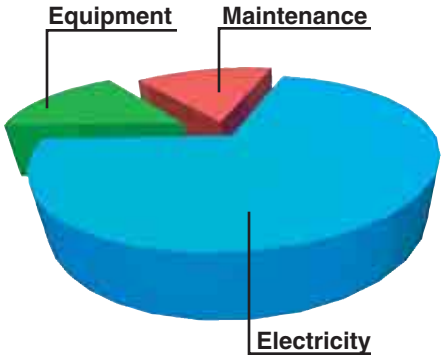
Capacities from: 158 to 300 cfm
Pressures from: 80 to 217 psig

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 BSD series rotary screw compressor is no exception.

Kaeser's BSD 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.

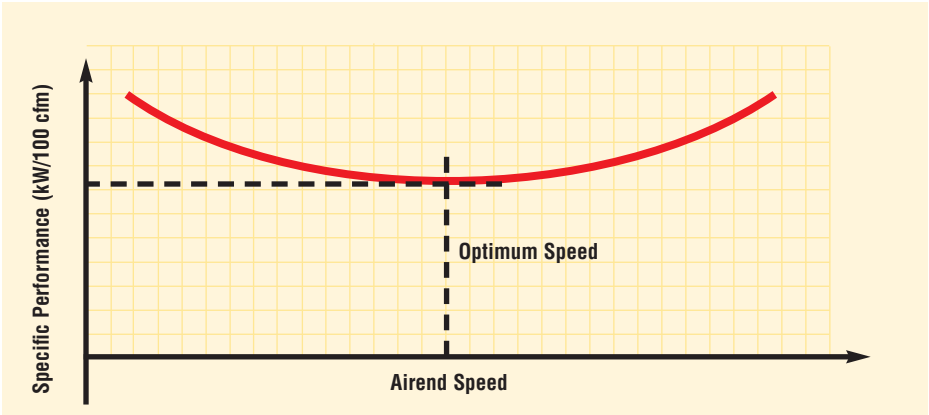


70% of Your Long Term Compressor Cost is Electricity

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

Two-stage 4 micron air intake filter extends airend life and is easily serviced.

2 Efficient Separator System

BSD 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 BSD 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 BSD 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 BSD 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

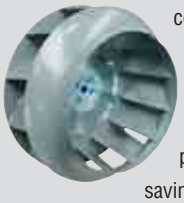
EPAct-compliant, high-efficiency, TEFC electric drive motor with class F insulation. Easily accessible grease fittings make maintenance a breeze.

Airend RPM = Motor RPM

One-to-One Direct Drive

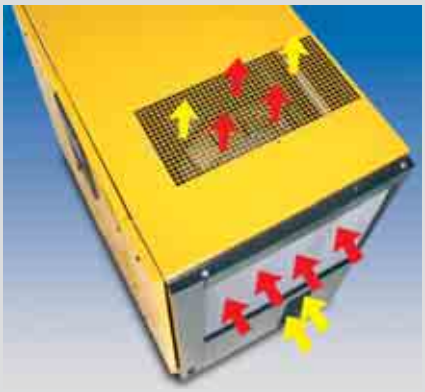
6 Improved Cooling and Air Flow Design

To increase operational reliability and reduce maintenance costs, the coolers are conveniently located on the outside of the unit. A powerful radial fan draws cool ambient air through the



cooler. This radial fan is extremely quiet and consumes less power than conventional axial fans, providing additional energy savings. It provides higher static pressure and is ideally suited for ducting and heat recovery applications.

Cooling air (shown by red arrows below) is drawn directly from ambient air through the coolers and exhausted upwards through the cooler box. The cooling air is not preheated which provides optimum cooling, thus significantly lowering air drying requirements. Also, any airborne dirt and debris will build up on the outside of the cooler where it is easily monitored and removed.



Cooling air for the motor and cabinet inside (shown by yellow arrows) is also drawn directly from ambient air and is exhausted through the same top exhaust opening. This allows easier ducting for heat recovery and energy management.

Inlet air for compression enters through two opposing slots on either side of the inlet air plenum. Each opening is large enough for all needed inlet airflow, greatly reducing the potential for pressure drop across the inlet.

Extremely Quiet

While the low-noise radial fan and the one-to-one drive considerably reduce noise levels, the new “split cooling air flow” design provides superior sound proofing without cooling efficiency losses. With noise levels as low as 68 dB(A), the BSD 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

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

SFC Option

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

Note: *BSD 40 and 60 not available with SFC.*

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.

Electric Motor

TEFC, high efficiency, 460 or 575 V, 3-phase, 60 Hz, 3600 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 30 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

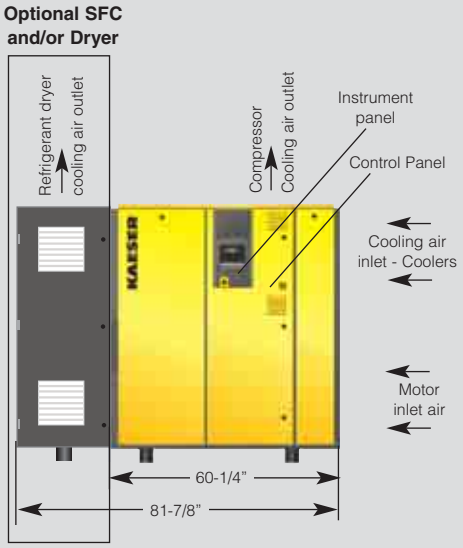
- Three separate cooling air inlet zones for the aftercooler, compressor, and drive motor ensure optimum cooling. Drawing ambient air across the coolers and motor through separate zones avoids preheating and results in lower approach temperatures, longer lubricant life, and cooler motor temperatures.
- 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.

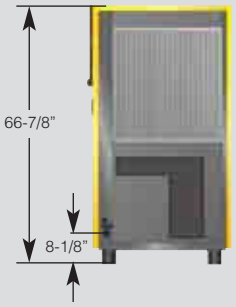
Enclosure

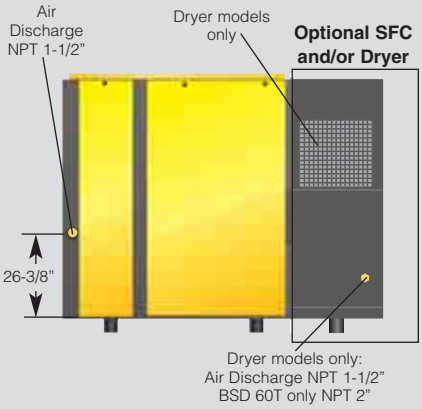
Compact unit is soundproofed by a sheet metal enclosure with mineral wool and plastic liners. Enclosure features a durable powder-coated finish. Compressor is mounted on base frame with a solid steel floor and vibration isolation mounts. Additional vibration isolation for airend, motor, and separator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

Dimensions

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







Compressed Air System Design

Kaeser's team of engineers are always at your service to help design or optimize your compressed air system. With decades of experience in system design, special applications and energy audits, our entire team can meet your unique requirement.

Using specialized tools such as our Air Demand Analysis and Kaeser Energy Saving System we can provide an accurate assessment of your existing installation and use predictive models to demonstrate how proposed changes will improve your system performance.

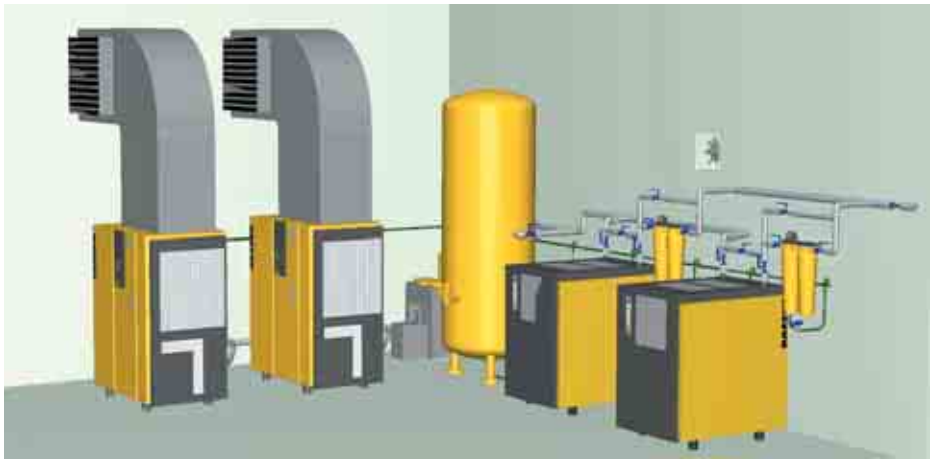
Then, using a state-of-the-art CAD software, Kaeser can lay out the proposed system and produce traditional two-dimensional and three-dimensional drawings. This is a huge benefit in project planning as it helps you visualize not only new equipment but also how it will fit into the building along with existing equipment, piping, walls, vents, etc. This helps ensure smooth installation as well as good access for service in the future.

BSD 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)
BSD 40	125 175	195 162	40	60¼ x 40½ x 66⅞	68	2105
BSD 50	125 175 217	241 192 158	50	60¼ x 40½ x 66⅞	69	2183
BSD 60	125 175 217	294 230 185	60	60¼ x 40½ x 66⅞	71	2359

(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.



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ISO 9001:2000 Quality 14001:2004 Environmental

Member of COMPRESSED AIR AND GAS INSTITUTE CAGI
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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.

USBSD