

KAESER
COMPRESSORS

Built for a lifetime.™



Rotary Lobe Blower Packages

Com-paK Series

Flow capacities to 2603 cfm

Pressures up to 15 psig

Vacuum down to 15 in. Hg

kaeser.com

Com-paK Series

The superior single source solution

Kaeser Com-paK blower systems offer the best combination of quality construction, reliable performance, and ease of ownership. The Com-paK design features a full scope of supply that is unmatched in the industry. Our complete package design minimizes time and money spent on engineering, procurement, documentation, and installation. Com-paK units arrive fully assembled and ready to operate.

Integrated engineering

Integration is the key to optimizing efficiency and streamlining maintenance costs. Kaeser has led the industry in offering fully integrated blowers engineered to withstand even the most demanding installations. A complete package design reduces time spent specifying and purchasing blower system components, and after the sale there is only one supplier to call for support on any part of the blower package.

Low life cycle costs

In addition to reducing engineering and installation costs, the Com-paK is very energy efficient. It is also designed for easy maintenance, and the few maintenance points are all accessible through one cabinet panel. Additionally, the rugged reliability of Kaeser blowers means fewer lifetime repairs. In fact, Kaeser is so confident in the benefits of our design that we offer a five-year warranty on Omega tri-lobe blower blocks sold as part of standard Com-paK packages.



Easy installation

Com-paKs are designed with a unique component layout to minimize floor space and allow side-by-side placement. Kaeser's tri-lobe blower block, combined with a full six-sided enclosure (standard), results in a package with the least noise and vibration. No additional soundproofing is needed. Further, our Com-paK models arrive pre-assembled, offering major time and labor savings during installation.

Superior connectivity

Integrated Com-paK blowers feature Sigma Control 2™ with Omega Control software to monitor and control the blower package. Versatile communication modules also enable these packages to connect with master controllers, like Sigma Air Manager 4.0 (SAM) or other centralized control systems for enhanced reliability, energy optimization, and plant automation.

Clear instrumentation

Com-paKs without integrated electrical components feature pressure/vacuum gauges, discharge temperature gauge with shut-down switch, and inlet filter differential monitoring/vacuum filter switch.

Maximum efficiency: IE3 motors

Users can enjoy the benefits that these premium efficiency motors have to offer by choosing Kaeser blowers.

Guaranteed performance specifications

To ensure the projected savings during actual operation, Kaeser provides you with the effective overall power consumption data, as well as the usable flow rate, in accordance with ISO 1217, Appendix C or E, as applicable. Kaeser's integrated blower packages are tested to the BL 300 standard as developed by CAGI.



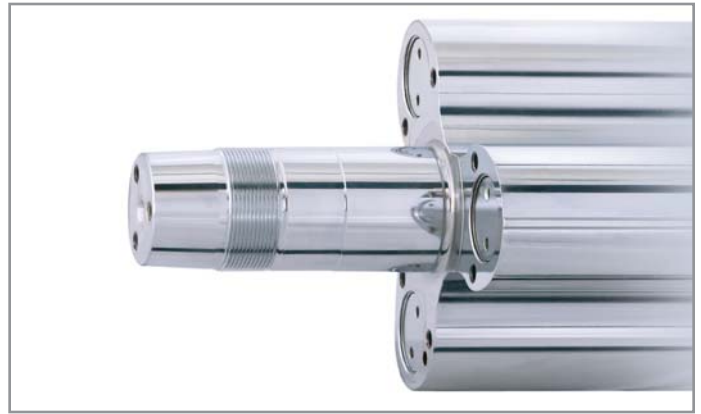


Rugged and reliable design



Omega blower

Kaeser's advanced tri-lobe design offers the best combination of low vibration, energy efficiency, and low noise operation. The ribbed, single-piece casing ensures optimal heat dissipation and torsional rigidity.



One-piece rotors and sealing strips

One-piece, ductile iron rotors are balanced to the closest tolerances for smooth, efficient operation at all speeds and pressures. Our over-sized shaft diameters and rigid construction minimize shaft deflection. Specially designed rotor sealing strips reduce sensitivity to contamination and intermittent thermal overloading.



Gears

Spur-type, case-hardened, precision ground timing gears minimize vibration and mechanical noise and ensure optimal rotor timing for improved efficiency. The straight cut gears do not subject the rotors to axial loads, making it possible to use longer lasting roller bearings.

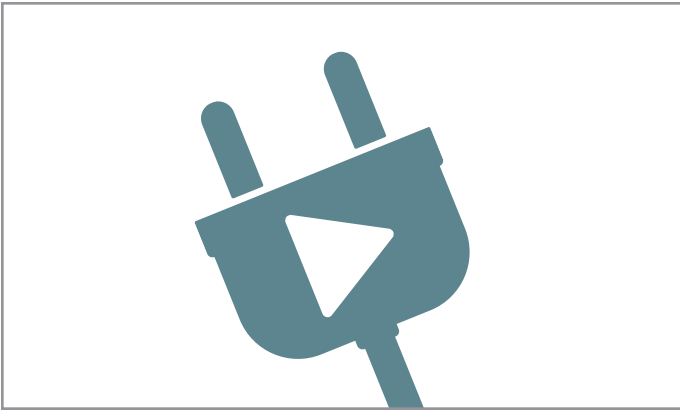


Generously sized bearings

Heavy duty cylindrical bearings absorb the continuously changing radial gas-forces exerted onto the cylinders and last up to ten times longer than axial thrust bearings under the same load conditions.

Oil slingers on both gear and drive ends of the blower provide lubrication to the bearings, gears, and input shaft seal to ensure long service life.

Plug and play integrated packages



Plug and play

Kaeser Com-paK series blower packages ship completely assembled and wired. One electrical and one plumbing connection and they are ready operate.



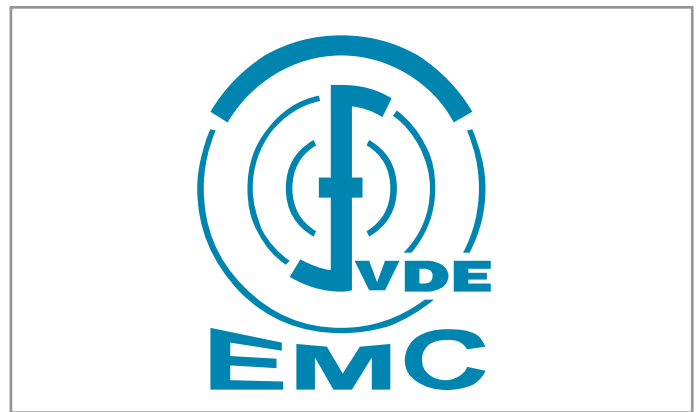
Start control (STC)

STC versions with integrated wye-delta start for constant speed operation are equipped with a premium contactor, overload protection, and phase loss monitoring. Sigma Control 2 and a dependable emergency stop system complete the package. STC is available as part of an integrated package on BBC, CBC, EBC, and FBC models (excludes BB52C).



Omega Frequency Control (OFC)

Using variable speed control, the OFC frequency converter adjusts blower performance to match application air demand. Everything is ready for immediate operation, since all programming and parameterization is performed at the factory. OFC is available as part of an integrated package on BBC, CBC, EBC, and FBC models (excludes BB52C).



EMC certified

The OFC control cabinet and Sigma Control 2 are tested and certified as individual components together with the complete blower system to EMC directive EN 55011 for Class A1 industrial power supplies.





Efficient and dependable with Sigma Control 2™



Integrated controller

Sigma Control 2 is available on integrated packages and ensures efficient blower control and monitoring. The generously sized display, RFID reader for secure access, and numerous interfaces enable fast, reliable communication, while the SD card slot makes data storage and software updates a breeze.



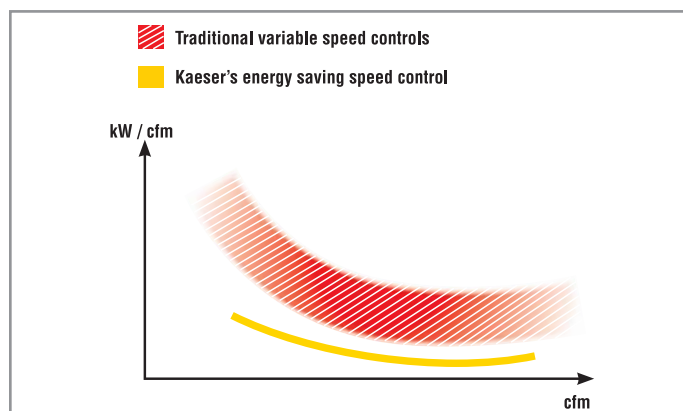
Comprehensive sensors

A wide range of sensors and switches for monitoring pressure, temperature, speed, oil level, and filters ensures dependable blower operation and allows remote monitoring and visualization of operational status.



Communications protocols

Sigma Control 2 has superior communications capabilities. An Ethernet port and built-in web server facilitate integration into the Industrial Internet of Things (IIoT). EtherNet/IP, ModBus, Profinet, Profibus, Devicenet, and other industrial communications interfaces are also available as plug-in options for seamless integration into plant control/monitoring systems.



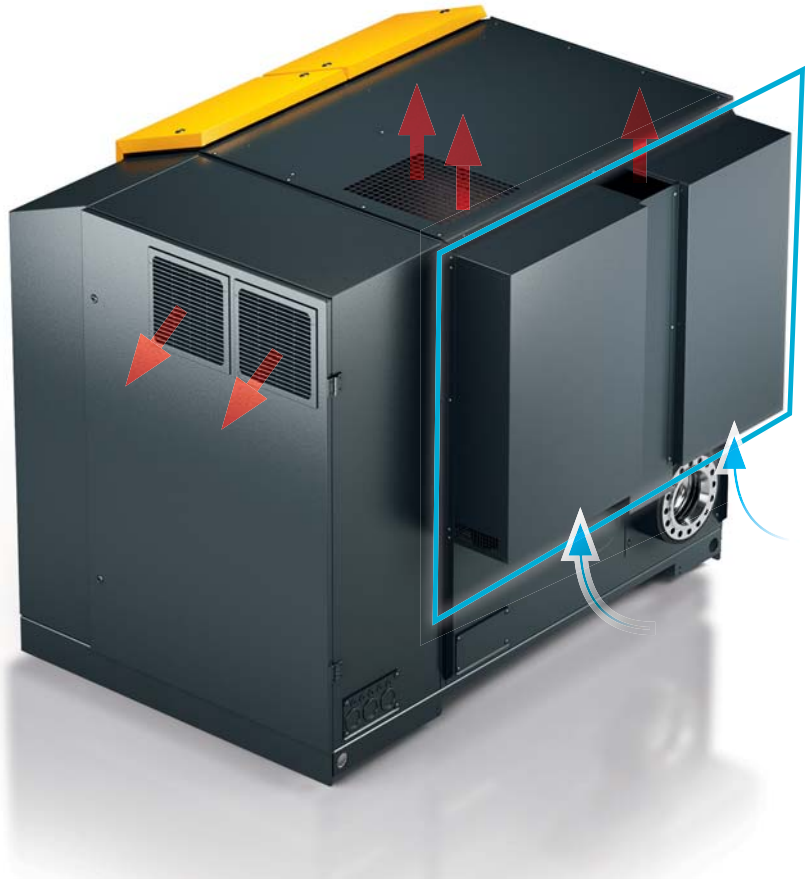
Optimized specific power

The moderate maximum speed and the near-constant specific power across the wide variable speed control range combined, achieve significant energy savings throughout the entire operating curve. These integrated variable speed drive models come with Omega Frequency Control which includes pre-programmed parameters for simplified installation.

Package cooling and enclosure design

Parallel cooling concept

Kaeser's integrated package design separates airflows for the blower, motor, and electrical cabinet. This ensures air is not preheated before entering the blower, which keeps the overall efficiency higher. It also makes sure the coolest possible air is being channeled across the drive motor. A dedicated fan guarantees that regardless of the operating speed of the package, cooling air is flowing through the enclosure. The blowers can operate in ambient temperatures up to 104 °F.



Extremely low sound and vibration

Kaeser's Com-paK sound enclosures are built for exceptional noise reduction and easy access to maintenance points. Heavy gauge construction and powder coat finish make it suitable for both indoor and outdoor installation. Heavy duty dampers absorb vibrations before they reach the base of the unit or sound enclosure. They also reduce stress on plumbing and wiring.



Service-friendly design

Kaeser blower packages set the standard for fully packaged blowers that are reliable, durable, energy efficient, and simple to maintain. When you consider all the benefits of owning a Built for a lifetime™ machine, it's clear that a Kaeser integrated blower package will save you money, year after year.



Easy service features:

- A single front panel easily removes for complete access to all major components
- Inlet filter requires no tools for servicing
- Drain valves with gasketed caps simplify fluid changes
- High visibility sight glasses allow the fluid levels to be checked at a glance from the front of the package
- V-belt guard is easily removed, but provides full protection
- Automatic belt tensioner maintains drive efficiency and eliminates frequent adjustments. Tension status is easy to see at a glance and adjustments only take a few minutes.
- Easy-to-read instrumentation
- Easily accessible motor grease fitting

Sigma Air Manager 4.0

Advanced energy management

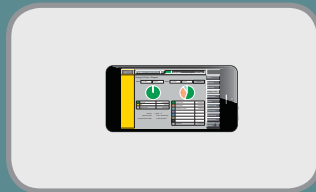


Kaeser's Sigma Air Manager 4.0 (SAM) can control up to 16 blowers and only turns them on when needed to meet air demand. This improves system stability, reduces energy use, and equalizes blower run time.

SAM 4.0's advanced communications capabilities makes connecting with plant SCADA systems easier than ever. Using the desired system flow rate calculated by the SCADA, SAM 4.0 selects the most efficient combination of units to produce the required flow, keeping energy costs as low as possible.

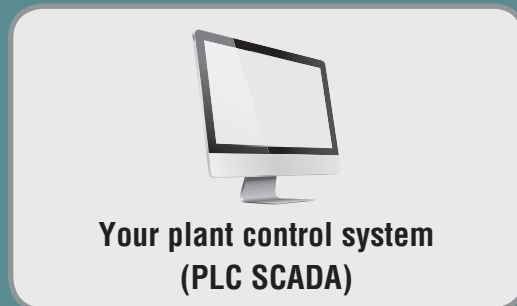
SAM 4.0 also provides blower status messages and alarms to help minimize downtime. Using SAM 4.0's built-in Kaeser Connect capabilities, you can remotely monitor operating status, maintenance schedules, and energy usage—on any networked device.

With SAM 4.0's robust data storage hardware and analysis software you can record and review your system's function and energy usage in easy-to-read charts. This continuous system data acquisition helps you analyze plant operations and optimize energy efficiency.



Your digital output devices

KAESER CONNECT web server

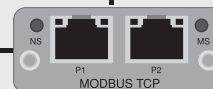


Your plant control system
(PLC SCADA)



Sigma Air Manager 4.0

Optional Communications Module
e.g. Modbus TCP
(Profibus and Profinet
also available)



KAESER SIGMA NETWORK: 100 Mbit/s



Connects up to 16 blowers, compressors, or vacuum units

Controller:
Sigma Control 2



Connects units with Sigma
Control 2



Secure data—secure business

Equipment

IE3 motor

Premium efficiency IE3 motor from Siemens, with three PTC thermistors; variable speed drive models matched to OFC frequency converter. Service is quick and cost-effective thanks to easy access, central lubrication points for motors with greasable motor bearings.

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. Interfaces—Ethernet: additional optional communication modules for: EtherNet IP, Profibus DP, Modbus, Profinet, and Devicenet. RFID card reader, web server, Kaeser Connect user interface, visualization of signals at analog and digital inputs, warning and alarm messages, graphical display of pressure, temperature, and speed trends. SD card reader for storage of data relating to process data, operating hours, working hours, as well as warning and alarm messages on an SD card. Update will upload via an SD card.

Kaeser Connect

Create a LAN connection between a PC and the Sigma Control 2; launch internet browser; enter Sigma Control 2 IP address and password; access blower control via integrated web server. The user interface shows machine status in real-time, the signals at the analog and digital inputs, lists warning and alarm messages and graphically displays pressure, temperature, and speed trends.

Optional equipment

Air-cooled aftercooler

For temperature sensitive applications, Kaeser offers ACA air-cooled aftercoolers, which can provide outlet air temperatures within 18 °F of ambient. Features include TEFC/IP55 fan motor and a process air temperature gauge with a user-set maximum temperature switch.

Pulsation dampener

Efficient inlet and discharge side absorption silencers have a wide frequency range to mitigate unwanted process air pulsations; excellent dampening of fluid-borne noise transmitted by piping.

Inlet/outlet silencers

Inlet and outlet silencers come standard. Inlet has washable and reusable polyester filter to protect the blower from damaging particulates. Filter media has low flow resistance to minimize pressure drop and the filter differential pressure is displayed on the instrument panel.

V-belt drive with guard

V-belt drive provides flexible pressure/flow combinations and dependable performance. Kaeser packages are standard with our automatic v-belt tensioner. Our fully-enclosed belt guard offers complete protection and is easily removed for convenient maintenance access.

Pre-mounted valves

Check plate and relief valves are standard. Unloaded start valve is optional. All come pre-mounted to save on installation costs.

Kaeser Start Control

Kaeser Start Control (STC) provides reduced current starting (wye-delta) and enhanced instrumentation. Indicators include: power on, drive and fan motor overload, oil level monitor, dirty inlet filter, high discharge temperature and a general warning. The IEC IP-54 enclosure is dust and splash tight, may be wall or bracket mounted, and is also available as a retrofit for non-integrated packages.

Technical specifications

| Model | Pressure | | Vacuum | | Max. rated motor power (hp) | Pipe connection (in.) | Dimensions with sound enclosure W x D x H (in.) | Weight (lb.) |
|---------|--------------------------------|--------------------------------------|-------------------------|----------------------------------|-----------------------------|-----------------------|---|--------------|
| | Max. operating pressure (psig) | Max. air delivery at 4.4 psig (icfm) | Max. vacuum ("Hg) (vac) | Max. intake at 6"Hg (vac) (icfm) | | | | |
| BB 52C | 15 | 170 | 15 | 170 | 20 | 2 | 25.5 x 20.8 x 36.8 | 600 |
| BB 69C | 15 | 208 | | 208 | 20 | 2.5 | 38 x 31 x 47 | 716 |
| BB 89C | 15 | 290 | | 293 | 25 | 2.5 | | 727 |
| CB 111C | 11.5 | 335 | | 340 | 40 | 3 | 45.3 x 38.5 x 51 | 850 |
| CB 131C | 15 | 434 | | 440 | 50 | 3 | | 925 |
| DB 166C | 15 | 550 | | 554 | 50 | 4 | 45.1 x 43.8 x 51 | 1393 |
| DB 236C | 15 | 780 | | 787 | 60 | 4 | | 1503 |
| EB 291C | 15 | 1009 | | 1017 | 100 | 6 | 63 x 55.7 x 66.7 | 2795 |
| EB 421C | 15 | 1419 | | 1430 | 100 | 6 | | 2895 |
| FB 441C | 15 | 1458 | | 1469 | 125 | 8 | 75.6 x 63.8 x 75.5 | 4321 |
| FB 621C | 15 | 2065 | | 2080 | 175 | 8 | | 5236 |
| FB 791C | 11.5 | 2603 | | 2620 | 150 | 10 | 77.9 x 63.8 x 82.7 | 4960 |

Performance data to ISO 1217, Part 1, Annex C. Package dimensions and weight without control cabinet.

Specifications are subject to change without notice.

CAGI certified performance

Our blowers' energy efficiency is listed according to Blower Test Standard BL 300. Performance data is published as part of the Compressed Air and Gas Institute's (CAGI) Performance Verification Program. CAGI data sheets for our blower packages are available at www.kaeser.com/cagi.



Scan QR code to download
the NEW
Blower Test Standard BL 300



The world is our home

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

With innovative products and services, Kaeser Compressors' 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. Every Kaeser customer benefits from the decades of knowledge and experience gained from hundreds of thousands of installations worldwide and over ten thousand formal compressed air system audits.

These advantages, coupled with Kaeser's worldwide service organization, ensure that our compressed air products and systems deliver superior performance with maximum uptime.



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