

Screw Blowers

EBS / FBS Series

With the world-renowned SIGMA PROFILE 

Air flow 10 to 67 m³/min, Pressure differential up to 1.1 bar



Check out the inside...

Simply use your smartphone to decode the link in the QR code and take a virtual flight to explore the inside of a KAESER screw blower (<http://www.kaeser.com/ebs-flight>).

EBS / FBS series

Blower efficiency redefined

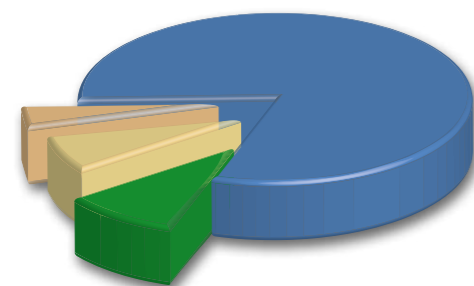
The rotors in KAESER KOMPRESSOREN's new EBS and FBS series screw blowers are developed from the world-renowned SIGMA PROFILE and have been designed to meet the specialised needs associated with blower applications. Just like their compressor counterparts, KAESER's screw blowers deliver more air and more savings. Together, the blower airend with the premium quality mechanical and electrical components create a powerful, energy-efficient turnkey system with a forward-thinking design.

Efficient operation

KAESER screw blowers use up to 35 percent less energy than conventional rotary blowers and even achieve significant energy savings compared to currently available screw blowers. The combination of a blower airend with high-efficiency SIGMA PROFILE rotors, flow-optimised components, efficient power transmission and drive components ensures exceptional performance, guaranteed by KAESER in accordance with the stringent requirements of ISO 1217.

Air at the press of a button

Delivered as user-friendly, turnkey systems, KAESER screw blowers simply need to be installed in position, connected to the air distribution network and the electrical supply and you're ready to go! The laborious processes of oil-filling, drive belt installation, motor adjustment, procurement of a suitable frequency converter, programming, cabling in accordance with EMC regulations, drawing circuit diagrams, organising CE and EMC certification – the list goes on – are thankfully in the past. There's no doubt about it: complete, certified machines from systems providers save time and money while delivering many years of dependable operation.



- Compressed air system investment
- Maintenance costs
- Energy costs
- Potential energy cost savings

Guaranteed performance specifications

To ensure that you benefit from 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 in Appendix C, or E as applicable.

Cool AND quiet

KAESER screw blowers also master the balancing act between best possible damping of structure- and fluid-borne noise with optimised cooling of the blower airend, drive motor and intake air. In fact the reduction of fluid-borne noise – i.e. pulsations caused by the compressed process air that are conveyed in the connected pipework – has been refined to the point of perfection.

Long-term dependability

Renowned throughout the world for their quality design, components and manufacturing, KAESER products ensure long-term machine and process availability you can count on. Quality features include durable rotor bearings, dependable power transmission, specifically dimensioned drive motors, rigid sound enclosures with effective cooling air flow, SIGMA CONTROL 2 machine controllers for efficient and dependable operation – the list goes on and on!

Low total life cycle costs (LCC)

Energy costs can comprise up to 80 percent of a blower system's total life cycle costs (LCC). This is where KAESER's new screw blowers make a difference with their exceptional energy efficiency. In order to ensure maximum cost-transparency, all costs for commissioning, maintenance and servicing should also be considered. Dependable service and spare parts availability, further help to reduce total cost.

EBS and FBS – The screw blowers



Image: EB 380S STC





EBS / FBS series

Pure efficiency – SIGMA 



SIGMA PROFILE blower airends

The high-efficiency blower airends combine a wide control range with near constant specific power. Equipped with SIGMA PROFILE rotors, they ensure maximum air delivery and keep power consumption to an absolute minimum.



Durable bearings

All radial forces are borne by four robust cylinder roller bearings, which are rated to ensure long airend service life. The rollers are encased in high-tech cages for optimum lubrication at all speeds.



Dependable seals

The field-proven sliding ring seal on the blower airend's drive shaft is maintenance-free and provides dependable sealing – even in hot and / or dusty environments.



Continuous system monitoring

Sensors for oil level and temperature monitoring are integrated into the blower airend. The oil chamber is designed to ensure this functionality even during machine operation when the oil is in motion.



EBS / FBS series

Secure and efficient



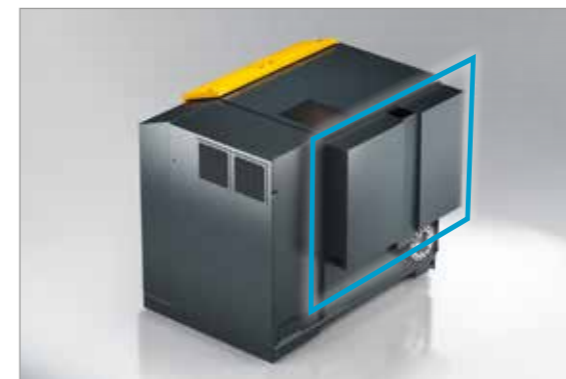
SIGMA CONTROL 2

The SIGMA CONTROL 2 ensures efficient blower control and system monitoring. The generously sized display, RFID reader and numerous interfaces enable fast, reliable communication, whilst the SD card slot makes data storage and updates a breeze.



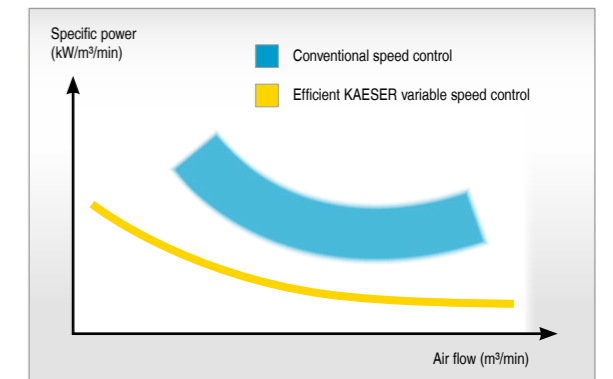
Comprehensive sensors

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 visualisation of operational status.



Cool inlet air

Process air and motor cooling air are drawn in separately from outside the enclosure. This boosts efficiency and leads to a higher usable air mass flow rate for the same power consumption. The blowers can operate at ambient temperatures up to +45 °C.



Optimised specific power

The moderate maximum speed, the extra dense screw profile and the speed control as a constant characteristic of specific power across a wide variable speed control range all combine to achieve significant energy savings throughout the entire operating range.

EBS / FBS series

Plug-and-play



START CONTROL (STC)

The integrated Y-Δ-starter version operates at constant speed and is equipped with a premium contactor, overload protection and phase loss monitoring. The SIGMA CONTROL 2 and a dependable emergency stop system round out the package.



SIGMA FREQUENCY CONTROL (SFC)

Using variable speed control, the SFC frequency converter adjusts blower performance to match varying application air demand. Everything is ready for immediate operation, since all programming and parametrisation is performed at the factory.



Plug-and-play

The turnkey blowers not only come complete with sensors, STC/SFC, SIGMA CONTROL 2 and emergency stop switch, but are also pre-filled with oil and are fully certified. This significantly reduces the work and costs required for planning, installation, certification, documentation and commissioning.



EMC-certified

The SFC control cabinet and SIGMA CONTROL 2 are tested and certified as individual components, and within the scope of the blower system as a whole, to EMC directive EN 55011 for Class A1 industrial power supplies.



Equipment

IE3 motor

Premium efficiency IE3 motor from Siemens, three PTC thermistors as standard, variable speed drive models matched to SFC frequency converter. Service is quick and cost-effective thanks to easy access central lubrication points for motors with re-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, interface - Ethernet. Additional optional communications modules for: Profibus DP, Modbus, Profinet and Devicenet. SD card slot for data storage and updates, RFID card reader, web server, KAESER CONNECT user interface, visualisation of signals at analogue and digital inputs, warning and alarm messages, graphical display of pressure, temperature and speed trends.



SD card reader

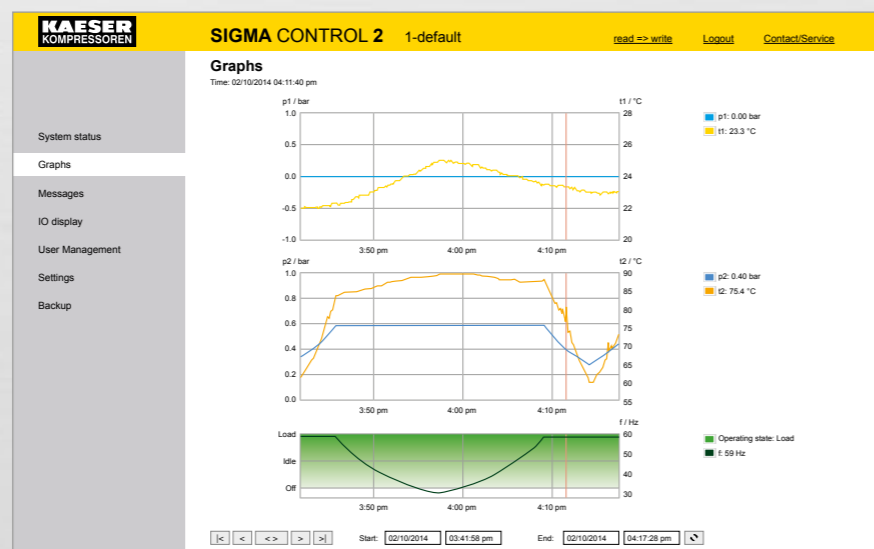
Used to record process data, operating hours and completed maintenance work, as well as warning and fault messages; card can be used to deliver updates.

Power transmission

High-efficiency belt drive, automatic belt-tensioning control for consistent power transmission, belt guard; belt-tensioning device for belt changes doubles as motor lifting device.

Pulsation dampener

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



KAESER-CONNECT

Create a LAN connection between a PC and the SIGMA CONTROL 2 (SC2), launch Internet browser, input SC2 IP address and password, access the blower controller via the integrated Web server. The user interface shows machine status in real time, signals at the analogue and digital inputs, lists warning and fault messages and graphically displays pressure, temperature and speed trends.

Additional optimisation



SIGMA AIR MANAGER 2

The SIGMA CONTROL 2 internal compressor / blower controller and the SIGMA AIR MANAGER 2 master controller provide more than just optimised blower air system efficiency. Thanks to their high level of data integration and multiple interface options, they can be easily integrated into advanced production, building management and energy management systems.



Optimum conditions

Carefully matched peripheral components such as weather protection screens, supplementary fans and sound dampeners in the inlet and outlet ducts, for example, help to maintain a pleasant working environment.



Heat recovery

Heat exchangers can significantly cool the process air even at high ambient temperatures. The recyclable heat can be utilised for space heating and / or hot water heating, thereby drastically reducing energy costs.



Cooler

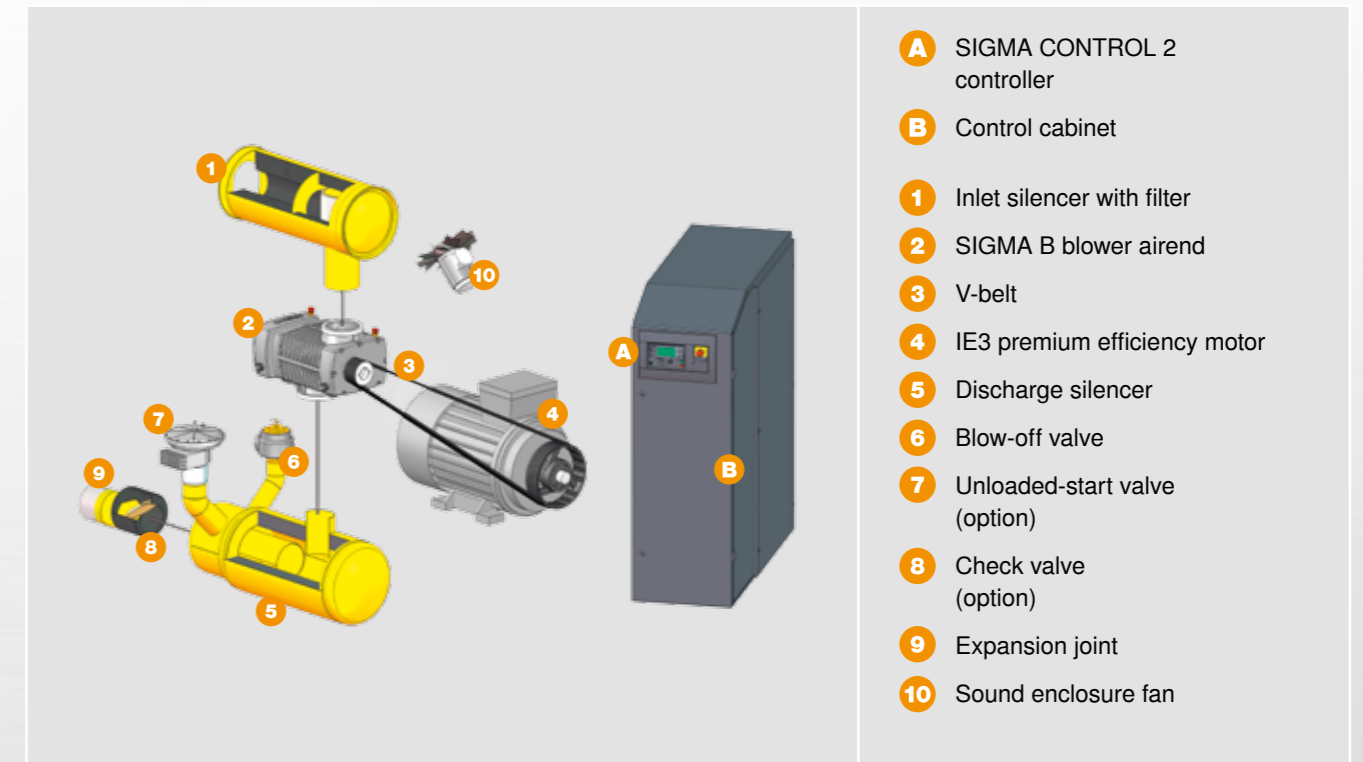
With minimal pressure drop, the efficient ACA-type aftercooler uses a temperature switch to reliably limit blower air temperature to 10 °C above ambient.

Technical specifications – EB 380S

Model	Gauge pressure		Max. rated motor power	Pipe connection	Dimensions with sound enclosure W x D x H	Weight max.
	Max. differential pressure	Max. air delivery *				
	mbar (g)	m³/min	kW	DN	mm	kg
EB 380S L SFC	650	38	45	150	1940 x 1600 x 1700	1400
EB 380S M SFC	1100	37	75			1600
EB 380S L STC	650	36.5	45			1400
EB 380S M STC	1100	36	75			1600
Views						

* Performance data as per ISO 1217, Appendix C for STC version, Appendix E for SFC version

Design



Technical specifications – FB 660S

Model	Gauge pressure		Max. rated motor power	Pipe connection	Dimensions with sound enclosure W x D x H	Weight max.
	Max. differential pressure	Max. air delivery *				
	mbar	m³/min	kW	DN	mm	kg
FB 660S L SFC	650	67	75	200	2250 x 1950 x 1900	1850
FB 660S M SFC	1100	66	110			2200
FB 660S L STC	650	66	75			1850
FB 660S M STC	1100	65	110			2200
Views						

* Performance data as per ISO 1217, Appendix C for STC version, Appendix E for SFC version

Detailed customer-specific planning



KAESER – The world is our home

As one of the world's largest manufacturers of rotary screw compressors, KAESER KOMPRESSOREN is represented throughout the world by a comprehensive network of branches, subsidiary companies and authorised partners in over 100 countries.

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 all products operate at the peak of their performance at all times and provide maximum availability.

