

GBS rotary screw blowers

Peak performance at high flow rates

GBS rotary screw blowers set a new benchmark in compressor technology for the 75 to 160 kW power range, with a flow rate from 22 to 104 m³/min and differential pressures up to 1100 mbar. These machines not only feature exceptional control characteristics, quiet operation, an optimised footprint and low maintenance requirements – they also deliver consistently high efficiency across the entire control range.

The efficiency of GBS rotary screw blowers remains consistent across the control range, rather than just at certain points – which will make this machine an especially attractive alternative to turbo compressors. This new blower for the low-pressure range draws on Kaeser's many decades of expertise in the development of highly efficient rotary screw compressors and automation technology, through to smart machines, in order to meet the needs of Industrie 4.0 environments. The new Kaeser rotary screw blowers are up to 35 percent more efficient than conventional rotary lobe blowers, and also deliver significant energy advantages as compared to many other rotary screw blowers and turbo compressors available on the market.

Power transmission from the motor to the compressor is via loss-free, maintenance-free gearing, which means that the GBS impresses with its highly efficient operation and low maintenance requirements. What is more, these machines are designed for space-saving installation and exceptionally quiet operation.

SFC versions feature an integrated frequency converter for dynamic adjustment of the flow rate to actual demand, with frequency converter and motor perfectly matched to deliver consistently optimised overall efficiency. For power outputs up to 110 kW, particularly efficient synchronous reluctance motors are used.

For constant flow rates, the STC version is available, featuring a star-delta starter and energy-saving IE4 Super Premium Efficiency motors.

In order to ensure that predicted high savings are translated into reality, Kaeser guarantees the power consumption per unit of flow rate (specific power consumption in kW per m³/h) in accordance with the narrow tolerances of ISO 1217, Annexe E. Customers therefore enjoy the peace of mind that comes with guaranteed accuracy of the projected savings and amortisation periods.

The integrated Sigma Control 2 controller ensures operational reliability and smart communication via integration into process control systems, including those with



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Industrie 4.0 requirements. The Sigma Air Manager 4.0 master controller is recommended for blower stations with multiple blowers, as it features control and regulation algorithms specially developed for the needs of low-pressure applications. This enables even greater energy savings and simplification of automation.

Applications with especially high energy requirements, such as the production of air for aeration in wastewater treatment facilities and bioreactors, as well as for flotation and fluidisation, are sure to benefit from this advanced automation and compressor technology from Kaeser.

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Images:



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