

KAESER
COMPRESSORS

Built for a lifetime.™



Air System Solutions for Wastewater Treatment Plants

Systems for Wastewater Treatment Plants

Reliable, energy efficient solutions

Wastewater treatment plants provide a critical service to our communities. WWTP systems operate continuously and equipment must be completely reliable and sustainable. Kaeser delivers exceptional air system solutions for wastewater treatment operations that are engineered for long life and continuous energy savings.

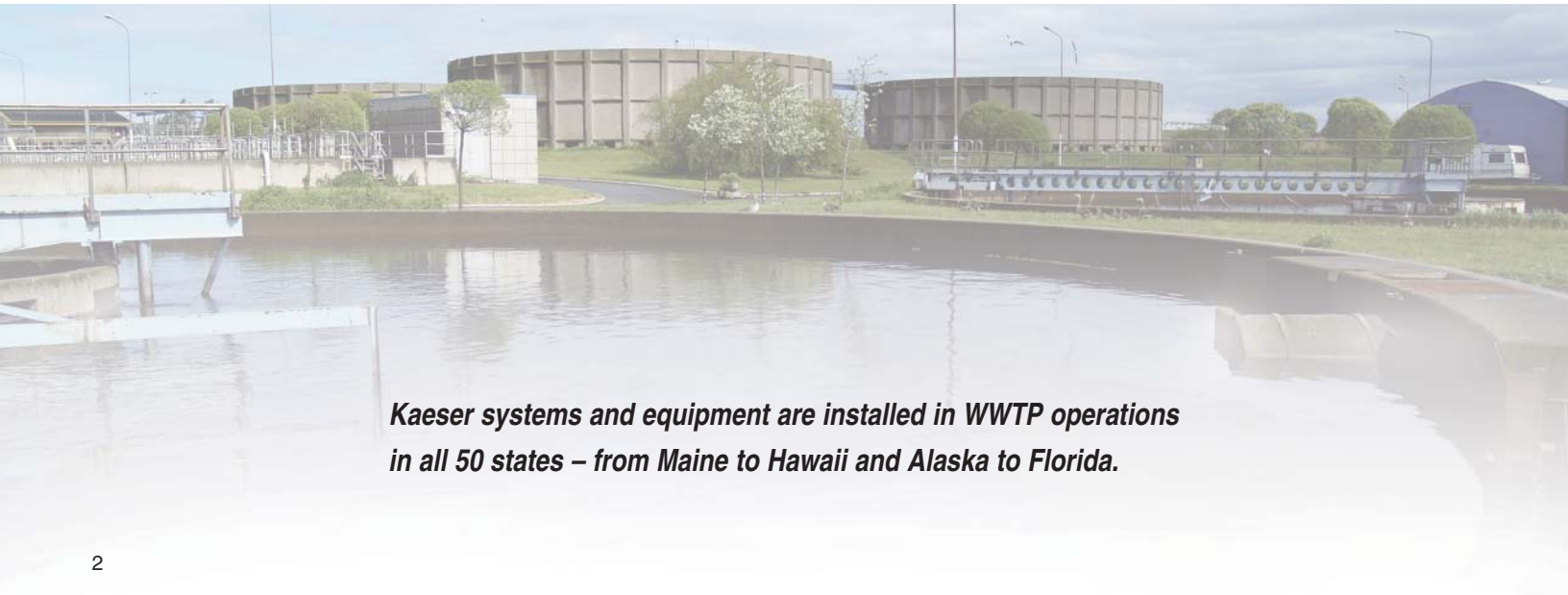
Meeting Tough WWTP Requirements ... and More

In order to best serve the community, WWTP designers and operators need blowers that offer:

- Best possible equipment reliability
- Lowest life-cycle costs
- Simplicity and ease of maintenance
- Superior energy efficiency
- Small footprint and ease of installation
- Low-noise operation

To fulfill these needs and more, Kaeser supplies fully packaged blower systems for applications including aeration, agitation, membrane scouring, filter backwashing, and bio-gas recovery. We also provide complete compressed air systems for controls, instrumentation, and shop air.

Beyond the excellent performance and quality of our equipment, Kaeser offers comprehensive design and installation support, a 24-hour emergency parts delivery pledge, maintenance and repair services, air system audits, and more. Strong support is always available whenever you need it.



Kaeser systems and equipment are installed in WWTP operations in all 50 states – from Maine to Hawaii and Alaska to Florida.



Kaeser is helping improve WWTP operations and efficiency by:

- Replacing mechanical aerators with more efficient, reliable, and low-maintenance blower technology
- Replacing older blowers with modern energy-efficient ones
- Minimizing power costs with load splitting, sequencing, and superior multi-blower controls

Products engineered for WWTP

The complete package concept



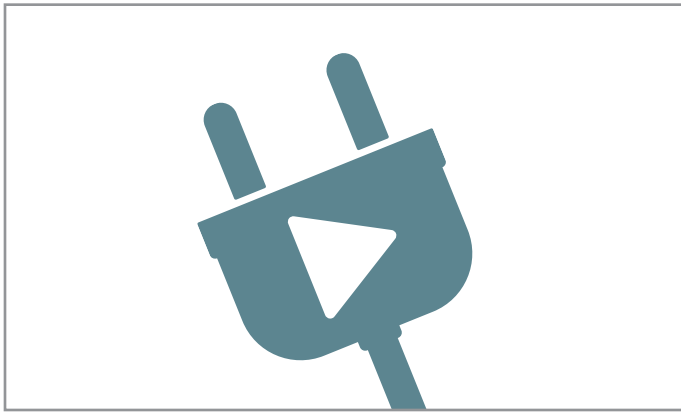
Wastewater treatment plants across the country have discovered that factory-built blower and compressor packages provide distinct benefits to their operations.

Our rotary lobe and rotary screw blower packages are engineered to simplify installation while ensuring proper integration, component compatibility, and equipment protection for many years of trouble-free performance. Their floor space-saving design allows for side-by-side installation, while the full enclosure keeps vibration and noise levels low—without additional soundproofing.

Kaeser's integrated rotary lobe and rotary screw blower packages are designed for easy maintenance, and the few

maintenance points are all accessible through one cabinet panel. Furthermore, the rugged reliability of Kaeser blowers means fewer lifetime repairs.

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. Their full scope of supply includes motors, drives, valves, enclosures, controls, and instrumentation. 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.



Plug and play

These turnkey blowers come complete with sensors, wye-delta start or variable speed drive, Sigma Control 2™, and an emergency stop switch. They are also filled with oil and fully certified. This significantly reduces the work and costs associated with planning, installation, certification, documentation, and commissioning.



Maximum efficiency: IE3 motors

TEFC premium efficiency motors are standard. Each motor is selected for superior efficiency and durability and sized conservatively for long life.



Advanced communications

Integrated blowers feature Sigma Control 2™ with software to monitor and control the blower package. An Ethernet port and built-in web server facilitate integration into the IIoT. ModBus, Profinet, Profibus, Devicenet, and other industrial communications interfaces are also available as plug-in options for seamless integration into plant control/monitoring systems.



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.

Sigma Control 2™

Intelligent control and protection



To protect your investment and ensure the most efficient operation possible, we control integrated blower packages with our Sigma Control 2™. This intelligent controller comes standard with multiple pre-programmed control profiles so you can select the one that best fits your application.

Sigma Control 2 monitors a wide range of operating parameters, shuts the unit down to prevent damage, and signals if immediate service is required. It also tracks preventive maintenance intervals and provides notice when PMs are due. An RFID sensor provides secure access and simplifies managing maintenance intervals. An SD card slot with

included card enables fast, easy software updates, storing key operational parameters, and offers long-term data storage for analyzing energy consumption and compressor operation.

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

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.

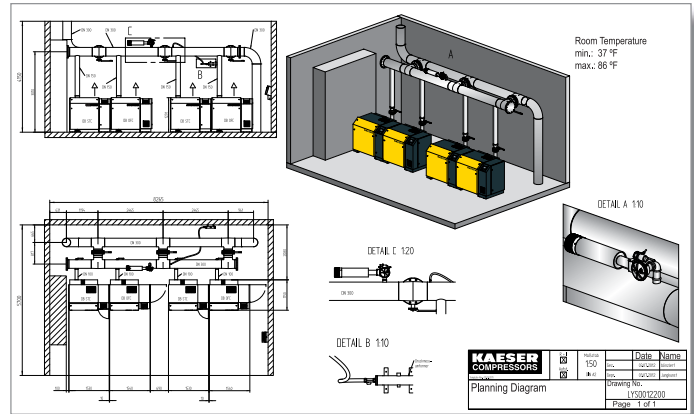
Engineered solutions

Kaeser is always at your service to help design or optimize your wastewater treatment air system. From complex installations to challenging environments to limited space, Kaeser can design a system to meet your specific requirements for performance and reliability.

System design

Kaeser specializes in designing a complete air system that takes into account the numerous variables necessary to ensure optimal system performance. Based on your needs, our engineers can recommend the best layout, ventilation, and cooling fan capacity for your system.

To help make your project planning easier, Kaeser can also produce two-dimensional and three-dimensional drawings of the proposed system. Being able to visualize the new equipment and how it will fit into the building with the existing equipment is a huge asset in facilitating your installation planning.



Kaeser can provide valuable system drawings to simplify your installation planning.



Kaeser's containerized systems are tailored to meet any application demand.

Custom Engineered Solutions

Our turnkey, all-weather compressed air packages integrate our high quality blowers with rugged, weather-proof containers. These containerized systems are built to specification for any climate or location and are perfectly suited for even the most demanding wastewater treatment plants.

With remote connectivity supported by our Sigma Air Manager 4.0, air production is constantly monitored for optimum efficiency. Furthermore, the master controller's wide range of industrial communications interfaces allows seamless integration into the plant's SCADA system.



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Certified Management Systems

