

07.05.2024

AERZEN at ACHEMA 2024

Customised and reliable solutions for the process gas industry

AERZEN is one of the pioneers of compressor technology and is recognised as one of the most competent suppliers of technical solutions for process gas applications. Based on its enormously wide range of trend-setting blowers and compressors, the innovation leader realises customised concepts with maximum efficiency, safety and economy. The credo: it's not the machine that determines the process - it's the process that determines the machine. From 10 to 14 June 2024, AERZEN will be at ACHEMA in Frankfurt to present its large portfolio of solutions and its high engineering expertise.

Air and process gas compressing or handling are required in all key industrial sectors – also in critical or demanding areas. The requirements for the blowers and compressors used are as varied as the applications themselves. As a competent and experienced partner to the process gas industry AERZEN knows exactly what the application-specific challenges are and supports applications with sustainable state-of-the-art technologies, a wide range of services, the highest product quality, customised engineering and high-end technological solutions.

Hydrogen compression with screw compressors

For the compression of hydrogen in the low-pressure range, screw compressors are a sensible solution or supplement to high-pressure compressors. Due to their design-related internal compression without free inertia forces, screws are above all reliable and flexible endurance runners with very low maintenance intensity and comparatively low operating costs in full and partial load operation. The AERZEN range includes both oil-free (VRW series) and oil flooded (VMY series) versions and achieves top marks in the ranges of efficiency, installation space, economy and process reliability.

Green gas: AERZEN Biogas solutions

Whether producing biomethane, feeding it into kilometre-long supply networks or prepressure generation for block-type thermal power stations: Suitable for the different required suction and final pressures and processes, AERZEN offers a customised portfolio of blowers and compressors specially developed for the biogas market. These include the oil-injected screw compressor series VMX and VMY. The packages are characterised by maximum energy efficiency, system availability and service-friendliness as well as a large variety of types and many modification options. They work reliably in operation 24 hours a day. A particular advantage is the TÜV-certified explosion pressure shock resistance up to 12 bar.



This means that the machines are also approved for operation in processes with internal ATEX zone 1.

Oil-free process air for sensitive fields of application

AERZEN oil-free screw compressors are used where the quality of the conveying medium has a decisive influence on the production process. This is the case, for example, in chemical process technology, electronics and semiconductor production. The innovative compressed air technology developed by AERZEN is absolutely oil-free in accordance with ISO 8573-1, class 0 and guarantees 100% product purity. One example of customised engineering is the 2C G package based on the <u>double-stage screw compressor series 2C</u>, which was specially developed for handling and processing boil-off gas (BOG) in the shipping industry. The machines fulfil the safety requirements of DIN EN 1012-3 for flammable gases and guarantee maximum process safety.

Digital innovation: AERZEN Revamp = system planning with 3D laser scanning

Integrating new blower and compressor technology into an existing plant requires precise planning and perfect engineering. Digital innovations such as virtual reality make this process easier and are a real game changer for retrofit projects. For years, AERZEN has been working closely with partners in the field of 3D laser measurement in system manufacture. Using ultra-modern scanning technology, the plant and its surroundings are captured from various perspectives without any gaps, generating a complete 3D representation in the highest resolution and with minimum tolerance. Thanks to the true-to-original visualisation, design engineers no longer work in an empty room when converting and modernising existing systems, but directly in the customer's original environment with all actual dimensions and full transparency. This ensures absolute planning and design reliability and leads to a considerable reduction in investment costs.

You will find AERZEN at ACHEMA 2024 in hall 8, stand D38.

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About AERZEN

Industrial plants all over the world are supplied with gaseous media using AERZEN blowers and compressors. The innovative AERZEN machine technology represents experience gained over more than 160 years of company history. The AERZEN product portfolio includes rotary lobe compressors, positive displacement blowers, turbo blowers and screw compressors and, in addition to standard products, also offers customised special solutions. Digital services can be used to increase efficiency, availability and productivity in a sustainable and future-oriented manner. In addition, AERZEN After Sales Service offers the full range of services - from full maintenance contracts to repairs and modernisations of existing plants.



Image overview:



AERZEN-VMY.jpg The oil-injected biogas compressors in the VMY series enable a final pressure of up to 24 bar g *Image: AERZEN*



AERZEN-2C.jpg The oil-free screw compressor of the 2C series offers a high degree of flexibility for customised adaptation

Image: AERZEN



AERZEN-VRW.jpg The oil-free screw compressors in the VRW series bring large H₂ volume flows to the highest possible intermediate and final pressures with just a few compressor stages, without having to set up huge reciprocating compressor systems for this purpose *Image: AERZEN*

Keywords: process gas, biogas, screw compressor, blower, reliability, 3D laser scanning, hydrogen compression



Meta title: AERZEN at ACHEMA 2024

Meta description: AERZEN presents customised and reliable solutions for the process gas

industry at ACHEMA 2024

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