



Product News

## **AERZEN: from Machine to System Solution - double-stage Compressed Air Packages with Heat Recovery**

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*Aerzen, Germany -*

Thanks to open system integration, modular basic components and variable mechanical and electronic interfaces, the oil-free double-stage AERZEN screw compressors of the 2C series offer the highest functional adaptability for different drive and control concepts. In combination with customised systems for heat recovery, the individually designed compressed air packages become real energy savers and are part of a complete system solution.



Thanks to optimised design to the operating point, the double-stage AERZEN screw compressors of 2C series achieve high efficiency.

(Picture: ©AERZEN)

A large amount of heat energy is generated during the production of compressed air. If this process heat is recovered by means of heat recovery for further operating processes such as water heating, drying processes or preheating of burner air, considerable energy savings, emission decreases and cost reductions can be achieved. With high-performance compressor technology and customised heat recovery systems, AERZEN offers just the right answer. The result: maximum resource efficiency and cost-effectiveness. One example are the 2C series double-stage screw compressors with heat recovery from the [RKR Gebläse und Verdichter GmbH](#), a 100% subsidiary of AERZEN and the specialist for double-stage compressor solutions within AERZEN Group. These double-stage compressor solutions are turned into an innovative system solution of the customer application by the AERZEN customer consulting and engineering competence of RKR.

## **From Compressor to System Solution**

While the traditional machine perspective focuses “only” on inlet and outlet conditions, a system solution adds other perspectives and requirements, which is the customer's overall process. In this case, the focus is on the thermal energy contained in the compressed gas and the question of how this energy source can be used outside of the machine technology for the environment or also for process engineering. The challenge here is to create an optimum of functional integration, cost-effectiveness and efficiency while dissipating the greatest possible thermal energy.

## **Making sensible Use of thermal Energy**

The solution is an intelligent functional interconnection and control of several water coolers integrated in a tailored system technology and control architecture. This means that a large part of the electrical drive energy, which was converted into heat during compressed air generation, can be used, for example, for temperature control in the production process without using any additional energy sources. This enables significant energy savings, improved cost-effectiveness, increased energy efficiency of the overall system and, thus, an important contribution to the climate and the CO<sub>2</sub> footprint.

## **Maximum Plant Performance thanks to customised Compressed Air Solutions**

The air- or water-cooled compressors of the 2C series supply oil-free and absorbent-free compressed air in the pressure range from 4 to 11.5 bar (g) and

are designed for volume flows from 166 m<sup>3</sup>/h to 9,300 m<sup>3</sup>/h. The modular concept guarantees a high degree of functional adaptability for different drive and control concepts and ensures the greatest flexibility in adapting to application-specific requirements and customer-specific process conditions. In addition to functionally tailored solutions, customised versions for particularly sound-reduced applications, outdoor installations or heavy-duty container configurations are also used.