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## **Oil-free compressors for the utilisation of Boil-Off Gas (BOG)**

Application-optimised multistage screw compressors from AERZEN

**Based on multi-stage oil-free compression, RKR Gebläse und Verdichter GmbH, a wholly owned subsidiary of AERZEN, develops customised solutions for handling and processing Boil-Off Gas (BOG) in the shipping industry. The application- and cost-optimised screw compressors offer maximum reliability, process safety and energy efficiency and ensure sensible and safe handling of the BOG.**

Boil-Off Gas is a gaseous by-product that is generated during the storage and transport of liquefied natural gas (LNG). LNG is liquefied at very low temperatures (typically below -162°C) to reduce its volume and make it easier to transport over long distances by ship or truck. When LNG is stored or transported, the product gradually heats up and begins to vaporise. This vaporisation process generates the Boil-Off Gas. It consists of the original components of LNG, mainly methane (CH<sub>4</sub>), and possibly small quantities of other light hydrocarbons.

## **AERZEN: 2- and 3-stage oil-free compressors for BOG compression**

Compressors play a central role in the utilisation of Boil-Off Gas for various processes. The conveying medium CH<sub>4</sub> which can form an ignitable mixture when connected to air, and the low temperatures present particular challenges. For the handling and processing of Boil-Off Gas, the [RKR Gebläse und Verdichter GmbH](#) a 100% subsidiary of AERZEN, has therefore developed 2- and 3-stage oil-free compressors that are specially optimised for BOG compression. RKR is the specialist for multi-stage compressor solutions in the group of companies and is valued worldwide for its high engineering expertise, holistic approach and strong customer orientation.

## **Maximum safety and availability**

The new BOG 2C G compressors are based on the [double-stage screw compressor series 2C](#). They fulfil the safety requirements according to DIN EN 1012-3 for flammable gases and therefore also for BOG and guarantee the best possible system availability. A sealing gas system that ensures 100% gastightness and a ductile low-temperature material (spheroidal graphite grey cast iron) with a high mechanical load-bearing capacity ensure maximum process reliability. Depending on the environmental conditions, equipment with ATEX components is also possible. The packages can be certified by various ship classification societies, such as DNV GL, Lloyd's Register, LR and RINA, and achieve a high level of efficiency thanks to customised machine control. In combination with bespoke heat recovery systems, the energy balance can be further improved. For example, the compression heat can be used to preheat the BOG.

## **Perfectly tailored to the customer application**

The 2- and 3-stage compressors deliver oil-free and free of absorption material process gas in a pressure range of 4 to 17 bar (g) and are rated for volume flows of 166 m<sup>3</sup>/h to 9,300 m<sup>3</sup>/h. Depending on the requirements and ambient conditions, air-cooled or water-cooled versions or a combination of both are used. 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.

## **Solutions for all Boil-Off Gas applications**

Whether Recovery System (transport via pipeline to shore for heating gas processing), Fuel Gas Supply System (use as fuel and reliquefaction) or Cargo Handling System (transport, storage and handling of LNG on board the ship): AERZEN offers the right solution for all processes in which BOG is produced and can be reused after treatment.

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-BOG-package.jpg** For the handling and processing of Boil-Off Gas (BOG), AERZEN offers bespoke oil-free screw compressors with maximum process reliability  
*Image: AERZEN*

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**Meta title** AERZEN oil-free solutions for BOG compression

**Meta description** The BOG compressors from AERZEN are oil-free, process-safe, reliable, efficient and customised.

### Deeplinks:

<https://www.aerzen.com/de/produkt/oelfreie-2-stufige-verdichteraggregate-baureihe-2c>

<https://www.rkr.de/>

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