

# Product profile



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## **BITZER OS.A105: open drive ammonia screw compressors for large capacities in industrial refrigeration**

*Many industrial applications have high cooling demand. Whether it is for careful production of frozen goods in the food industry, in cold storage units and distribution warehouses, or a variety of process applications, R717 (ammonia) has proven its worth as a refrigerant in large industrial systems over the decades. With the OS.A105 series, BITZER is expanding its portfolio of open drive ammonia screw compressors to include even larger capacity ranges for the industrial refrigeration sector.*

The BITZER OS.A105 series was developed on the basis of more than 40 years of experience in screw compressor technology and the use of ammonia as a refrigerant. Open drive OS.A105 screw compressors are available in three displacement volumes – 1400, 1700 and 2000 m<sup>3</sup>/h at 2900 rpm – and represent reliability and maximum cooling capacities on their own and as part of a parallel compounding. BITZER has therefore doubled the refrigerating capacity of its previous range of ammonia screw compressors.

The compressors are optimised for use with an external frequency inverter like VARIPACK and thus ensure efficient operation in full and part load. Speed control enables displacement of up to 2760 m<sup>3</sup>/h at 4,000 rpm, increasing refrigerating capacity by up to 40 per cent per compressor. In the medium temperature application with an evaporation temperature of –10°C, for example, this means cooling capacities of 950 kW to 1400 kW at 2900 rpm.

### **Efficient and robust design**

BITZER open drive OS.A105 ammonia screw compressors boast a robust, low-maintenance design and quiet operation. The special rotor profile enables contact-free rolling of the male and female

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rotors and a low vibration level. The large contact areas of the roller bearings distribute the forces evenly and reduce frictional loss, thus contributing to the OS.A105 compressor's exceptional efficiency. The tried-and-tested shaft seal guarantees maximum tightness and durability. The compressors also come standard with an integrated check valve on the high pressure side, which simplifies compound operation and protects the compressors from back condensation of the refrigerant in standstill. Active oil management ensures operating reliability especially in the limit area.

Contractors and end users also enjoy the added benefits of the IQ MODULE, which comes standard with the compressors. The IQ MODULE not only assumes responsibility for key operation and protection functions, but also simplifies and optimises compressor installation, commissioning and maintenance. In addition, the IQ MODULE enables efficient operation of the integrated double slider for mechanical capacity control and automatic Vi adjustment. The sliders can be used for stepless adjustment of the cooling capacity between 10 and 100 per cent – for high efficiency throughout the application range and reduced operating costs.

BITZER offers an extensive selection of coordinated accessories such as couplings and coupling housings for its open drive screw compressors to ensure simple and safe connection of the flanged motor and compressor.



As an independent specialist for refrigeration, air conditioning and heat pump technology, BITZER is present all over the world: with products and services for refrigeration, air conditioning and process cooling as well as transport, BITZER ensures optimum temperature conditions for trade in goods, industry processes and indoor climate control – always striving for the highest possible energy efficiency and quality. BITZER is represented all over the world with 75 sites in 40 countries, including its sales companies and production facilities. Trade and service partners included, the BITZER network of manufacturing, development and sales extends to almost all countries in the world. In 2023, more than 4,300 employees generated a turnover of €1.01 billion; expenditure for research and development totalled €61 million.

[www.bitzer.de](http://www.bitzer.de)

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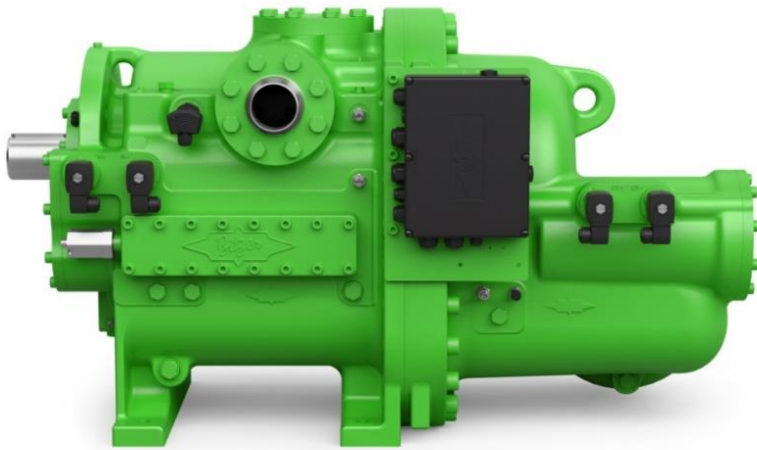


Image: BITZER open drive OS.A105 ammonia screw compressors for high cooling capacities