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[Freudenberg sealings on R744.com](#)

The global sealing technology specialist presents its innovative O-ring designs in combination with high performance elastomer-compounds for CO₂ Mobile Air Conditioning.

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Freudenberg's durable sealings combine an O-ring design with high performance elastomer-compounds, featuring high temperature and pressure resistance, permeation-tightness, and oil compatibility. They are suitable for all static sealing applications within the R744 (CO₂) cooling cycle, including on the high pressure side behind the gas cooler and the compressor.

After extensive alternating temperature tests, the sealings proved to be highly resistant against explosive decompression, showing a brilliant swelling behaviour and only minor changes of the mechanical characteristics, even at highest temperatures. Due to the use of optimized composition materials, Freudenberg's products resist even to extreme conditions of up to 140 bar and 160°C.

Main features

Key features and advantages of the R744 sealing solutions are:

- **Resistance:** materials 85 HNBR 230861 and 85 EPDM 232444 passed all tests regarding resistance to explosive decompression
- **Oil compatibility:** proven with PAG-oil (Fuchs Reniso ACC 46) as well as with PAO and POE oils
- **Permeation:** challenging permeation limit of max. 0,5g CO₂ per connection and year will be met
- **Reduction of assembly forces:** through the usage of O-Rings with new coatings applied

Please find more information in the presentation attached below.

Reaction

"Our durable sealings are the optimal choice for next-generation CO₂ air conditioning systems.

This proves that constant innovation is the best way to meet our customers' needs and deliver superior value," says Dr. Volker Peterseim, Head of Material Development Freudenberg O-Ring GmbH & Co. KG.

"Presenting our products on the market place for CO₂ Technology shows that Freudenberg is offering a solution ready for the global market," he adds.

Background

Freudenberg Seals and Vibration Control Technology is a member of the Freudenberg group offering customized seals for automobiles, machinery and various other applications. In close cooperation with its Japanese partner NOK, Freudenberg is a leading global partner for sealing to its worldwide customers.



More information:



[Freudenberg - Elastomer Sealings for R744 \(126 KB\)](#)

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