

# Hydrogen Application Diaphragms

## Diaphragm Seals in Hydrogen Applications

Molded elastomeric diaphragms are used in a variety of hydrogen applications across various parts of the energy value chain, from production and storage to transportation and end-use in fuel cells and vehicles. Some of the most common applications include regulators, diaphragm compressors, gas meters, and fuel cells.

However, material selection requires careful consideration of the demanding operating conditions, such as high pressure and rapid gas decompression (RGD).



Higher pressures will require fabric and some applications will require a fluorinated film facing. Due to hydrogen being such a small molecule, it is important to find elastomers with the lowest permeability ratings. Factors that need to be taken into consideration during material selection are explosive decompression, permeability, temperature, pressure and chemical compatibility.

Please consult with Diacom engineering to discuss potential material recommendations. As always customers will need to do proper testing to validate any material or design suggestions.

Please contact the Diacom sales team to answer any questions and discuss potential diaphragm designs using this technology.

## Diaphragm Design & Manufacturing Leader

DiaCom Corporation, an ISO 9001 and AS9100 certified company, is a recognized leader in the design, manufacture and application of innovative, high performance molded diaphragm seals. DiaCom serves a variety of markets worldwide including industrial, automotive, aerospace, food processing, water control, medical instrumentation, appliances and others. DiaCom offers state-of-the-art diaphragms designed for cost effectiveness, ease of installation, conservation, durability, and high performance characteristics.

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