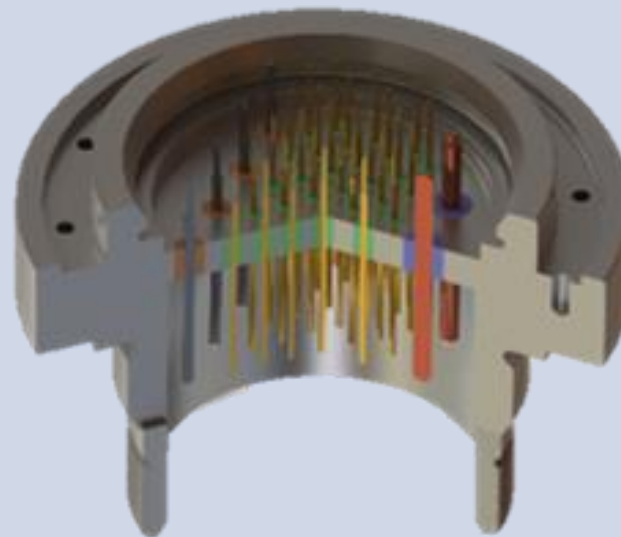


VAC-TRON and F4E have developed innovative Glass-to-Metal-Seals for the In-Vessel electrical feedthroughs of ITER in order to pass the signals produced by the sensors. Providing high resistance to temperature and pressure with the possibility to offer safe and compact designs, this hermetic interconnexion technology can find many applications in aerospace, energy and Big Science facilities

Value proposition

- The main benefit of the Glass-to-Metal-Seals is the hermeticity that offers the glass bulkhead, reducing the risks of hermetic failure on critical operation. Besides, the Glass-to-Metal Sealing technology sustains temperatures from -195°C to 300°C and a pressure up to 2500bar
- Furthermore, it offers a way to seal different types of conductors on a single wall (thermocouples, RF and DC signals, power conductors, ...)



Fusion heritage

VAC-TRON worked with Fusion for Energy, the Agency in charge of providing the European contribution to the ITER project, in the development of seals for the In-Vessel electrical feedthroughs of ITER.

The Glass-to-Metal-Seals provide high resistance to temperature and pressure with the possibility to offer safe and compact designs. This hermetic interconnexion allows the electric signals from the sensors to pass through the In-Vessel walls and give expert's access to the temperature, irradiation, composition of the plasma.

The technology developed by VAC-TRON can find many applications in aerospace, energy and Big Science facilities.

Having safe and performant hermetic interconnexions to pass electrical signals between two hostile atmosphere is a requirement that can be found in many applications outside the ITER project such as space (security feedthroughs with a reduced weight), Big Sciences facilities (compact designs for Ultra High Vacuum applications), Oil and Gas (safety power and signal feedthroughs) or hydrogen.

VAC-TRON can offer bespoke solutions (feedthroughs and connectors) according to client needs, from nano connectors (0,1g) to big connectors (+20kg). VAC-TRON S.A. has an R&D department to serve the market and our clients requirements.

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