



allectra
A future with vacuum

www.allectra.com

INNOVATE

PHILOSOPHY

Collaborate with as well as support our customers to find the right solution. We are problem solvers who listen to customer experience.

INTELLIGENCE

We let the quality of our intelligence, gained through market experience, guide our own research and development.

VISION

Build sustainable relationships with our customers and be a first choice in our sectors.

ORIGINATION

We are committed to developing new products which can yield technical advantage and cost-saving over conventional components.

SERVICES

We provide High Vacuum and Ultra High Vacuum components and bespoke solutions in multiple scientific and technology disciplines.

VALUES

High-performance, high-quality products and solutions with safety assured in all aspects.

CULTURE

Environmentally responsible business practices and proud to serve the scientific community – we are continually working to make sure our customer service meets expectations around the world.

EXPERIENCE

Fifteen years as a global manufacturer based in Germany and the UK with a sales and service network supported by offices in France and Italy.

Alectra GmbH was set up in 2002 in Berlin to manufacture and supply a full range of High Vacuum and UHV components. Over the last fifteen years the group has expanded to include: two further manufacturing facilities, one in Sussex, UK, and one in Villingen-Schwenningen, Southern Germany; sales offices in Italy and France, and a network of distributors worldwide.

Alectra offers a range of components compliant with international standards: Sub-D feedthroughs, Electrical feedthroughs, Coaxial feedthroughs, cables and connectors, UHV and High Vacuum valves, viewports, hardware and accessories.

Customers include universities, major synchrotron laboratories, OEMs and high technology companies.

Alectra Limited and Alectra GmbH are ISO 9001 certified.



**ISO 9001: 2008
GB01343**

Market Sectors



Cryogenics

High Technology Manufacturing



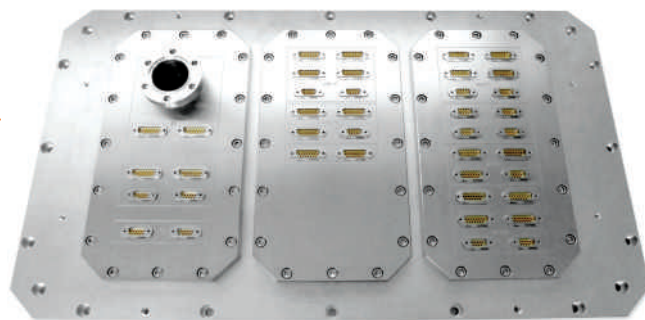
Nuclear Fusion

Photonics/Spectroscopy



Semi-Conductor Manufacturing

Synchrotron Science

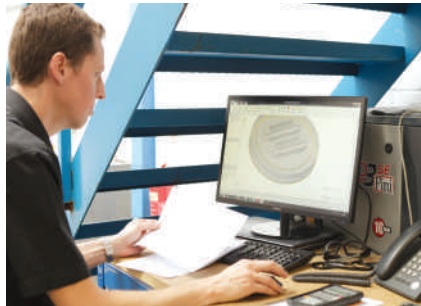


Surface Science

Custom Manufacturing



Allectra has a skilled team of physicists, technical advisers, engineers and specialist project managers who work with our customers on a project basis when a bespoke solution is needed.



We will produce detailed engineering drawings based on customers' sketches – 3D compatibility check is included.



All items are fully tested before being commissioned, and cleaned to our UHV standard



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Allectra Components

DN100CF with 2 x Sub-D15s



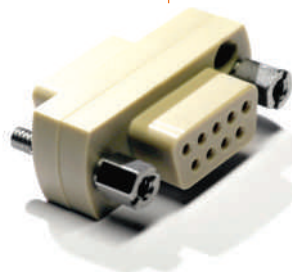
ISO-K100 with Sub-D37



PEEK Sub-D 9 Gender Changer
converts male to female, suitable for UHV environment



DN25KF with Sub-D9



DN40CF with 2 Double-Sided
50 Ohm SHV feedthroughs



DN40CF with 4 x BNCs



DN16CF SHV



Radiation resistant Kapton® Wire



DN16CF BNC Floating Shield





High Vacuum Sub-D15
ready-made cable



In-Vacuum SHV Connector



In-Vacuum MHV Connector



High Current MS
feedthroughs

DN40CF Thermocouple type K
with 2 x power pins





SMA-SMA UHV cables

DN16CF Single-Sided BNC with
UHV compatible cables



Low Pressure Bursting Disk
mounted on a DN40CF

DN25KF Flexible Bellows



DN40CF Motorised Linear Drive
with built-in Microswitch Box,
linear travel 100mm

New Product R&D

Our Berlin facility is home to our research and development team and is headed by Allectra Group CEO, Dr. Bernhard Luckscheiter. Allectra is committed to developing new products which can yield technical advantage and cost-saving over conventional components.





Manufacturing at Allectra

Allectra supplies components used on systems at research facilities all over Europe, America, Asia and Australia.

Manufactured parts, which may be special flanges made from stainless steel, are produced in the company's advanced workshops using numerically controlled manufacturing centres. Where one-off items are needed to fulfil complex customer requirements, the company's ISO 9001 system guides the procedure.

Sub-assemblies are welded using precision TIG welding, helium leak-checked and cleaned to the high standards required in the High Vacuum industry using a UHV compliant multi-stage cleaning system.

Allectra is a green company and uses only environmentally approved cleaning fluids. The manufacturing areas and offices of our East Sussex facility are heated by a carbon neutral wood pellet boiler and electricity for the manufacturing is generated by solar PV panels on the roof.



Our customers are important to us and providing the highest level of service will always be a priority. We are proud to collaborate with customers on complex projects in any of our sectors and will always work hard to make sure the solutions are of the highest quality and relevance.

“ We were very impressed with the quality and workmanship on the two flanges.

“ The quality of your components is high, our electrical technicians like to work with them and they have performed well over time.

“ Ordering components from Allectra has always paid off.

“ The connectors have met all requirements and your customer service certainly exceeded expectations! I hope to be ordering from you again soon, and will also pass your info on to some other folks who design vacuum systems.

“ I have just received the cube and the custom T-piece. They both look absolutely fantastic! Please thank your workshop guys for doing such a great job.

News

Neutron spectrometer upgrade on track



Experimental benefit The upgrade to the TOSCA instrument at ISIS has been helped by an Allectra vacuum component. (STFC)

Work is currently under way at the Rutherford Appleton Laboratory in Oxfordshire, UK, to upgrade a popular instrument at the ISIS neutron and muon source. The upgrade will significantly increase the capacity of the set-up referred to as TOSCA, benefitting the many scientists from industry and academia that use the instrument every year.

TOSCA is a neutron spectrometer that came online over a decade ago, and it is used by both industrial and academic users to explore atomic and molecular motions in materials. The instrument is currently undergoing a major overhaul that will enable many more neutrons to reach the instrument's sample point. By increasing the count rate and reducing the time needed for each experiment, the instrument will become more efficient.

Central to the upgrade is a 14.2 m super-mirror guide, which has been manufactured in Switzerland. This is connected to the detectors by a flight tube **made by Allectra**, which supplies custom vacuum components. The system must be kept at a vacuum pressure of 10^{-6} millibar to minimize collisions and maintain the high count rate. The upgraded instrument should be back in service in early 2017.

TOSCA is one of 30 neutron and muon instruments at ISIS, which is operated by the UK's Science and Technology Facilities Council. ISIS generates subatomic particles that are used to study a wide range of materials, including catalysts, hydrogen-storage materials, hydrogen-bonded systems, materials for the semiconductor industry, plus pharmaceutical and biological samples.



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