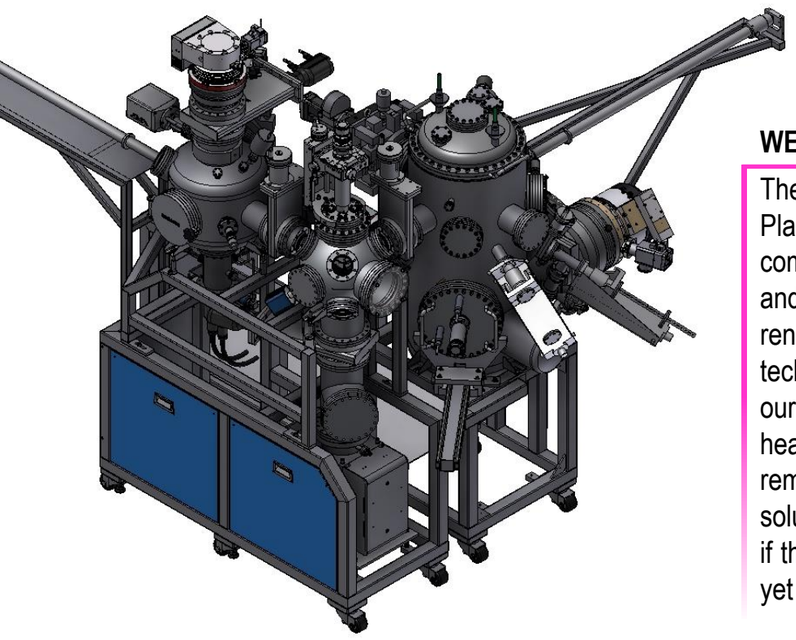
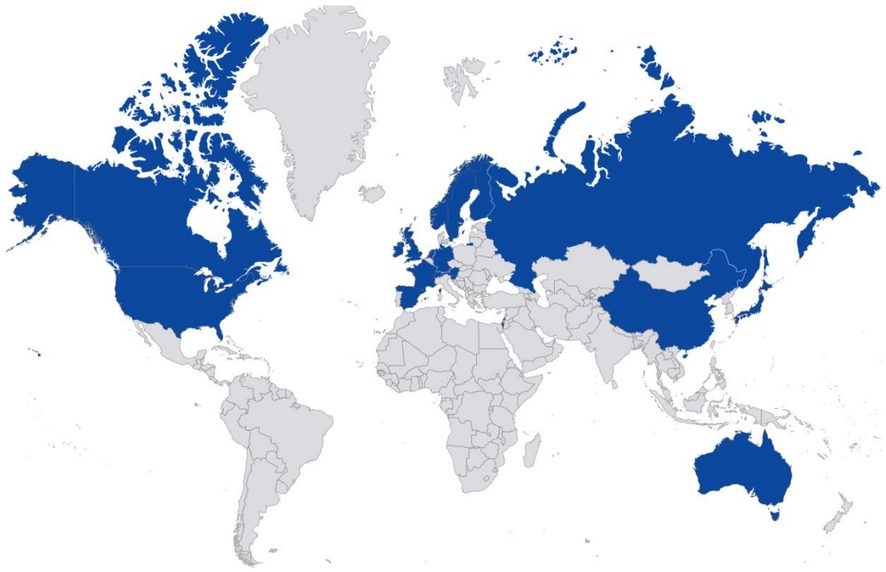


WE NEVER SETTLE

The in-depth relationship between Plassys and the international research community strengthens Plassys' skills and allows our equipment to always be at rendez-vous with the cutting edge of technology. We do offer standard tools to our partners, however we always enjoy hearing of new demands. Plassys' DNA remains the development of unique solutions for the most exotic of needs. So, if the right tool for your research does not yet exist, let us develop it together.

JOIN QUTEK COMMUNITY

From Australia all the way to the West Coast of North America, a large number of R&D laboratories and start-ups rely on Plassys tools when developping their quantum technologies. Working with a Plassys deposition tool is not only the opportunity to use a state-of-the-art system but also to always have access to a database of scientific articles on which comparable work is carried out on similar or identical Plassys equipment.



For further information, please contact our sales office

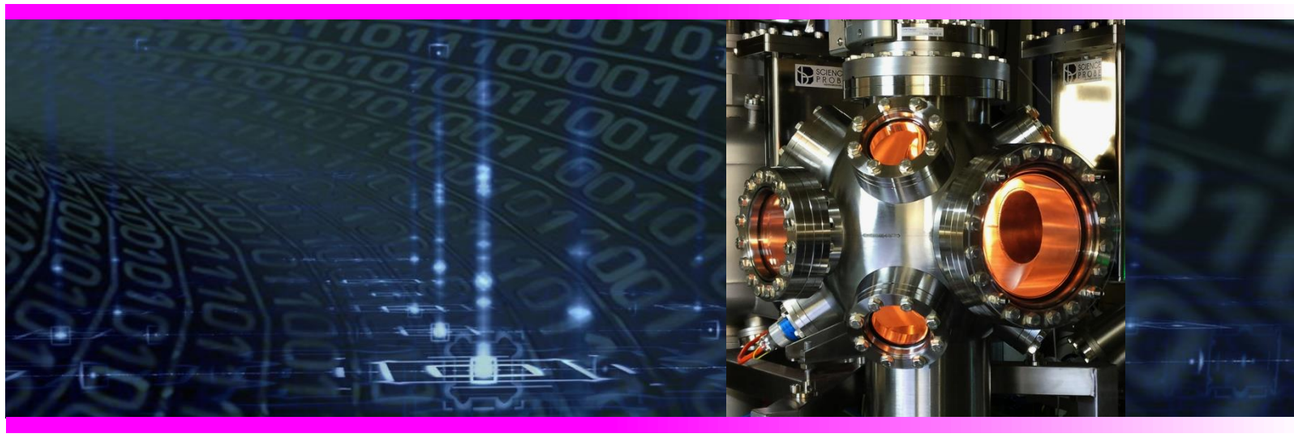
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Complete Deposition Solutions For Quantum Technologies

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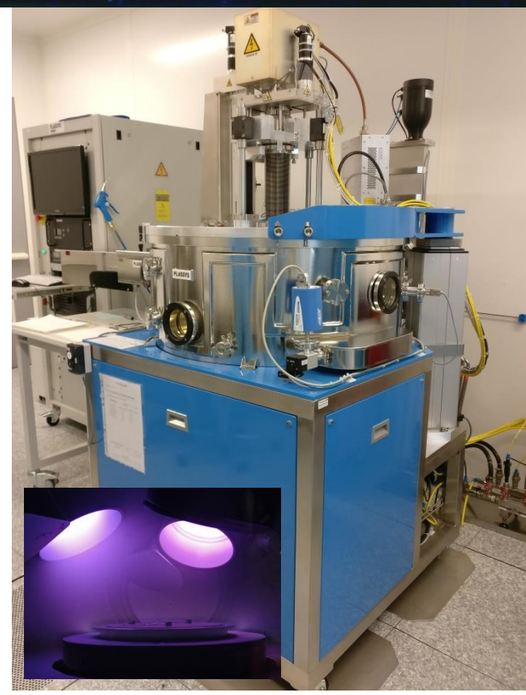
CHOOSE THE RIGHT TOOL
TAKE PART IN THE QUANTUM REVOLUTION

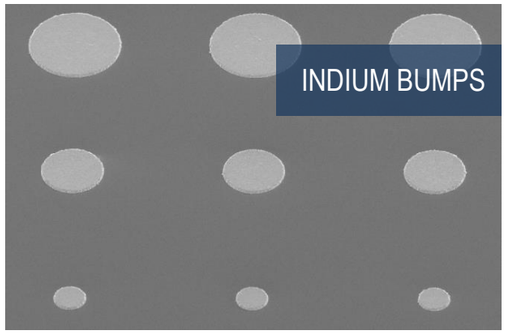
PLASSYS designs and produces top-level deposition systems for **quantum technologies** since **early 2000s**. No secret, it is owing to fruitful collaborations with world-leading research partners that **PLASSYS** can create its state-of-the-art machines and explore new technological routes, while continuously improving the traditional ones. Several PLASSYS tools are already in the heart of top-end quantum technologies including recently demonstrated **quantum computers**. **QUTEK Series** by PLASSYS now offers a wide range of **field proven** deposition solutions for the quantum technologies. Based on evaporation, sputtering and CVD techniques, **QUTEK Series** includes numerous standard and customized deposition systems.

SPUTTERING DEPOSITION: MP SYSTEMS

SUPERCONDUCTING CIRCUITS, JOSEPHSON JUNCTIONS, QUBITS, SINGLE PHOTON DETECTORS, QUANTUM PHOTONIC DEVICES

Sputtering is one of the most flexible routes for growing superconducting films and hybrids. Owing to a fully automated process control, PLASSYS **MP** systems routinely achieve the sub-nanometer thickness resolution.
The wide MP family provides adjustable geometrical configurations and deposition characteristics adapted to any request. Most of superconducting materials being very sensitive to oxidation, the high- and ultrahigh vacuum environment is mandatory in order to reach the best performance of your quantum devices





INDIUM DEPOSITION: ME450S-In

FLIP-CHIP BONDING, 3D CAVITIES

Considering the viability of large arrays of superconducting qubits, the interest for multilayer and 3D architectures is rapidly growing. Indium is a typical material of choice for superconducting interconnections; thick indium structures are often requested for bonding terminals. **ME450S-In** is the dedicated evaporation system PLASSYS offers for this purpose. While maintaining a high vacuum during the process, high deposition rates up to 10 nm/s can be achieved, enabling In films ranging from a few hundreds of nanometers to tens of microns in thickness.

ELECTRON BEAM DEPOSITION: MEB SYSTEMS

SUPERCONDUCTING CIRCUITS, JOSEPHSON JUNCTIONS, QUBITS, QUANTUM PHOTONIC DEVICES

From the deposition of electrical contacts on a single photon source to the fabrication of complex structures such as Josephson junction arrays, the electron beam deposition **MEB** systems are suitable for nanotechnology platforms and small-scale production. Their high reputation makes them the first choice of laboratories involved in superconducting quantum technologies.
Each unit is designed as a versatile stand-alone platform; it accomodates all the basic features required for reliable fabrication of high-quality quantum devices: high and ultrahigh vacuum environment, substrate preparation, evaporation under controlled tilt angles and temperatures, components for static and dynamic oxidation.



DIAMOND CVD REACTOR: SSDR150

COLOR CENTERS, SINGLE PHOTON SOURCE, QUBITS

Due to its peculiar properties such as very long coherence times or photo-luminescence efficiency, more and more R&D groups investigate diamond for emerging quantum applications.
SSDR150 is a microwave plasma-assisted CVD (MW-PACVD) reactor dedicated to **diamond film and gem** synthesis. Being the fruitful result of thorough R&D work, this reactor uses high power density plasma to enable high purity diamond film growth. The system perfectly fulfills the needs of **R&D labs.**

