SINGULUS TECHNOLOGIES (SINGULUS®) has supplied a number of systems for R & D activities of major semiconductor manufacturers, providing a wealth of experience and a strong reputation. SINGULUS TECHNOLOGIES is a renowned manufacturer of advanced thin-film deposition equipment. The SINGULUS TECHNOLOGIES TIMARIS and ROTARIS vacuum deposition machines work on the principle of cathode sputtering (physical vapor deposition = PVD). The machines can be used for customer applications in a wide range of applications. The PVD tools from SINGULUS TECHNOLOGIES offer a complete portfolio of process modules for a variety of applications. Functional layers consisting of different materials can be applied with a wide range of thicknesses. Extremely thin layers of about 0.2 nm are applied in the nanotechnology field.

The range of applications includes sensor technology, for example for use in medical technology and the Automotive industry, micro-electromechanical systems (MEMS), EUV technology, in magneto resistive random access memory (MRAM) and in applications for the “Internet of Things”. MRAM chips are non-volatile, i.e. it maintains the information even without power supply. As a result, computers would be operational immediately after switching them on since MRAM chips are extremely current and very fast, in particular mobile devices such as laptops, mobile phones, tablets and organizers could benefit from this new technology. Key parts of small size or chip laboratories can be manufactured, which include the entire functionality of a macroscopic laboratory on a plastic substrate only the size of a plastic card. With this chemical syntheses and analyses diagnoses (cancer as just one example), can be produced at high speed shortly. An additional application is the use of sensors in vehicle technology of automobiles.