



Fine Ceramics Technologies

FCT Group

EXPERIENCE AND COMPETENCE IN CERAMIC ENGINEERING



FCT Ingenieurkeramik GmbH
FCT Group

FCT Hartbearbeitungs GmbH
FCT Group

FCT Systeme GmbH
FCT Group

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FCT GROUP – EXPERIENCE AND COMPETENCE IN HIGH-TECH CERAMICS

Ingenieurkeramik GmbH FCT Group

FCT Ingenieurkeramik GmbH, located in Rauenstein, produces customized components made of silicon nitride ceramics and composites. They are typically green machined with corresponding equipment to near net shape and are used for aluminum foundry engineering, wear protection, electronics, metrology, optics and metal working. Our specialties are large, highly rigid, complex and lightweight components, sputter targets made of various ceramics and metals, as well as wear resistant, failure tolerant break pads made of C-reinforced SiC.

Our continuous R&D work focuses on the further development of materials and processing technology. For component production as well as external services we use advanced and very sophisticated processing equipment, including particularly large-volume, cold isostatic and uniaxial presses, hot presses and sintering units suitable for vacuum and inert gas operation at overpressures of up to 2.400°C and 2.000bar (HIP).

Hartbearbeitungs GmbH FCT Group

FCT Hartbearbeitungs GmbH, located in Sonneberg, has an extensive pool of machinery suitable for the green machining and, in particular, the hard and finish machining of ceramic materials and components. This machinery is used for our own production of ceramic components as well as for external service orders.

The range of ceramic components produced by FCT Hartbearbeitungs GmbH by use of our own production line comprises form small, high-precision parts, in particular made of zirconium oxide (ZrO₂), to large-sized parts with complex shapes made of silicon carbide (SiC). The large-sized components, which are seen as our specialty, were widely used in mechanical and chemical engineering as highly abrasive and corrosive stressed components and/or components subjected to thermal stress.

Systeme GmbH FCT Group

FCT Systeme GmbH, located in Rauenstein, is a leader in development and production of equipment used for hot pressing, gas pressure and vacuum sintering up to highest temperatures and spark plasma sintering, in particular for the densification of powder metals and non oxide engineering ceramics. The permanent implementation of customer requirements leads to new, innovative high-tech solutions at the highest level of quality and productivity.

The company recently focused on the development of the spark plasma sintering (SPS) technology. This effort already resulted in concepts and demonstrators for laboratory- scale apparatus as well as for wide-scale industrial use. This technology has opened up entirely new possibilities of producing innovative high-performance materials which cannot be made by other processing procedures.

Experience and competence in high-tech ceramics
Challenge us – we find solutions

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