

VITROPERM - the universal material:

## VACUUMSCHMELZE presents tape-wound and cut cores and power transformers at the 2012 PCIM 2012 in Nuremberg

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**Hanau / Frankfurt – VACUUMSCHMELZE GmbH & Co. KG (Hanau) will again attend this year's PCIM, the leading international trade show for power electronics, intelligent motion and power quality. At Stand 307 in Hall 11, the company's Cores and Components division will present its full portfolio of products, focusing this year on products from the nanocrystalline material VITROPERM® for power transformers and new IGBT drive transformers.**

**Toroidal tape-wound cores** by VAC are made of the nanocrystalline material VITROPERM and are designed for applications such as power transformers in power supplies for welding equipment, mobile machinery and efficient solar inverters with galvanic isolation. They enable compact push-pull transformers for the kilowatt range to be built for switching frequencies from approximately 5 to 50 kHz. The tape-wound cores from the Hanau-based company have high saturation induction (1.2 T) compared to ferrite cores (0.3...0.4 T) and lower losses, together with lower temperature dependence of permeability.

VAC also supplies **cut cores** of VITROPERM for alternative transformer design. A small air gap minimises shear and reduces effective permeability of the cores to prevent even DC voltage levels from saturating the core. The rectangular cores are suitable for use with coil bobbins and copper foil windings.

VAC's **drive transformers** for IGBT control are used in applications including motor or generator control, PV inverters and wind power inverters. They feature excellent stability of the magnetic properties over a broad operational temperature range from 40 °C to +105 °C and low leakage inductance for high-precision pulse transmission. In addition, VAC drive transformers are very compact thanks



to the use of cores with approximately three times the magnetic flux density of ferrite. They are 100 % high-voltage and partial discharge tested as well as featuring electrical insulation compliant with international standards e.g. EN 50178, IEC62109 or IEC61800-5-1.



**kW power transformers** for PV inverters and traction applications are generally customised designs based on nanocrystalline ring cores which offer significantly higher saturation induction (1.2 Tesla) than ferrite cores in addition to low hysteresis loss. These properties deliver the advantages of lower weight and volume, enhanced efficiency and extended operating temperature range (up to 120 °C).

#### **VACUUMSCHMELZE GmbH & Co. KG**

VACUUMSCHMELZE (VAC) with 1,500 employees in Hanau, designs, produces and markets advanced materials, particularly with magnetic, but also with other physical qualities as well as related products. In 1914, the first vacuum furnace laid the foundation for today's VACUUMSCHMELZE. Industrial vacuum melting techniques for alloys have been in operation since 1923.

VAC Group today achieves annual sales of more than 450 million Euros in over 40 countries and is holder of more than 750 patents. The company is among the world's most highly innovative developers of advanced industrial materials.

VAC's range of products comprises a broad array of advanced semi-finished materials and parts, inductive components for electronics, magnets and magnet systems for use in a wide variety of fields and industries spanning watch-making and medical technology, renewable energies, shipbuilding, automotive and aviation. VAC's custom solutions are developed in close collaboration with the customer, reflecting the company's expertise in materials, applications and state-of-the-art production technology.

Find out more at [www.vacuumschmelze.com](http://www.vacuumschmelze.com)

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