

Introduction

Vacuumschmelze Corporation has been producing specialised metallic materials with exceptional physical & magnetic properties since 1923. VAC products can be found today in industries as diverse as communication & data, automotive, automation & process technology, watch making, medical technology & even household appliances.

Soft Magnetic Cores

The unique combination of high permeability with very low losses of the alloys is the basis of the innovative **VAC** core range. The high-quality crystalline NiFe cores made of ULTRAPERM® have been market leaders for decades. They are constantly being technically and economically optimised and contribute to the reliable functioning of residual current safety switches.

Products

- Amorphous & nano-crystalline cores for magnetic amplifiers
- Low loss nano-crystalline cores for power transformers
- Current transformers for residual current circuit breakers & electronic earth leakage breakers
- Current transformers for electronic energy meters
- nano-crystalline cores for EMC / Common mode chokes
- Amorphous cores for Spike Blockers
- Pulse Power Cores
- Amorphous cores for telecommunications



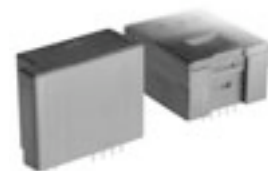
Inductive components

VAC inductive components are manufactured with the primary objective of producing a cost effective design, optimised physical volume & maximum reliability. **VAC** have a wide range of standard products as well as customised solution for specialised client applications.



Products

- Drive transformers for semiconductor switches
- Power transformers for storage chokes for SMPS, UPS & converters
- EMI, PFC & storage chokes
- Magnetic amplifier chokes
- Current sensors for precise AC & DC
- Current measurement
- Chokes for data & signal lines
- Current transformers for electronic watt-hour meters



VAC also specialise in compact power systems & control units for the automotive manufacturing industry. Some recent developments include chokes for voltage stabilisation used in petrol & diesel injection systems & current sensors with magnetic field probe for battery management.

Applications for VAC cores & Inductive Components

Telecommunications

VAC supplies the telecom industry with advanced inductive components. They are one of the leading forces behind the rapid developments in that industry. **VAC** cutting edge products are used in ISDN through to XDSL & PLC technology.

Products

- ISDN components such as interface transformers & modules
- ADSL filter components & low pass filter modules
- xDSL high pass transformers
- Power line communication transformers



Magamp Technology

By combining materials expertise and applied knowledge, **VAC** developed the world's first low-cost and loss-optimised Magnetic Amplifier controllers. These are now used in computer switch mode power supplies to stabilise the output voltages. Traditional transistors are too lossy for this application so the Magamp choke takes on the position of the transistor as a magnetic switch. **VAC** made Magamp technology accessible to modern mass markets.

Energy Conversion

Cores & Inductive Components for Switched Mode Power Supplies (SMPS), UPS, Adapter, DC/DC Converter, Welding Equipment, Solar Inverters etc. Common Mode Chokes are used in frequency converters and switched mode power supplies to attenuate common-mode interference. Current-compensated chokes are also characterised by excellent temperature stability and a small size.

Automotive & Transportation

The trend towards complex and ever more powerful electronic systems in vehicles is continuing. This results in a strong demand for inductives that do justice to the demands of the automotive industry. All products are examined and optimised in **VAC's** test laboratory for their suitability for automobiles. The **VAC** range of products for the automotive industry include: LF Antennae for keyless entry & go systems, current compensated chokes, filter & storage chokes, current sensors used in EPAS, x-bt-wire & starter/generator systems.

Electricity Meters

Throughout the world, electronic electricity meters are increasingly replacing the mechanical Ferraris meters. Many of the electronic electricity meters work according to the principle of the current transformer, which ensures the galvanic potential separation between the primary side and the meter. The **VAC** range of current transformers comprises current ranges up to 320 A as well as for ANSI and IEC markets.

Drive Technology

Cores and components for frequency converters. The **VAC** range comprises the following products: Common Mode Chokes, DC- and Output Chokes, Sine filter, commutating Chokes, Spike Blocker cores, Linear Chokes for RFI suppression, Current sensors, fly-back, single ended, push-pull Transformers, Current transformers.

Surge Protection Applications

Cores & Current transformers for residual current circuit breakers. **VAC**, being experts in magnetic materials, combine this with extended application know-how & created a broad range of innovative solutions based on nano-crystalline cores that have particularly made their way into the market segment of cores and components for RCCB - applications.