



**EVERY AC MOTOR DESERVES
A VACON DRIVE**

VACON
DRIVEN BY DRIVES

SAVE 10% OF THE WORLD'S ENERGY CONSUMPTION WITH VACON

Vacon is driven by a passion to design, manufacture and sell only the best AC drives on the planet. AC drives can be used to control electric motors or to help generate power from renewable sources. Vacon has R&D and production facilities in Finland, the United States, China and Italy, and sales offices in more than 25 countries. In 2008, revenues totalled EUR 293.2 million, and Vacon employed ca 1,200 persons worldwide. Vacon's shares (VAC1V) are listed and publicly traded on the Helsinki Stock Exchange.

Passionate attitude towards product leadership

Exclusively focused on variable speed AC drives, Vacon offers a unique blend of a dynamic and passionate attitude towards product leadership and customer services. Vacon is constantly working with a wide customer base where AC drives play an integral part of the business.

Vacon concentrates only on the essential: improving the customer's own product or process in order to bring the best possible value for the customer. With many years of experience in the field, we understand the customer's needs and can offer the most cost-effective solution to meet them in terms of process efficiency, energy savings, eco-friendliness, and the total cost of ownership.

Unique craftsmanship and R&D

More than 1,200 Vacon professionals worldwide concentrate on one thing only: providing state-of-the-art AC drives as close to the customer as possible. The secret behind Vacon's success lies in unique engineering craftsmanship and innovations. Vacon's R&D is constantly investigating the best practices in the field that are most appropriate for customers.

Today, as much as 7% of the revenues are invested into R&D, and our R&D units are located in Finland, China, USA and Italy. Therefore, we dare to say that Vacon AC drives make a difference in the market: whatever the need is – from the simplest to the most demanding – we are always open to take the challenge!



Cleantech which brings substantial savings

Vacon AC drives are 100% cleantech. Cleantech refers to all products, services, processes and systems that are less harmful to the environment than their alternatives. Vacon AC drives represent technology that not only helps you save in energy costs but also significantly improves the process control in your business.

If all AC motors in the world were equipped with Vacon AC drives, it could give savings of about 30% in the energy consumption of AC motors. This saving is about 10% of the world's total consumption of electrical energy.

Attractive partner

Vacon has a unique position in the market. It is an independent company that can focus entirely on developing AC drives. A global network combined with local production in different parts of the world makes Vacon an attractive business partner on all continents.

Vacon offers OEM partners, system integrators, brand label customers, distributors and industrial end-users a broad product portfolio and a high level of product and application expertise.

Global production & multichannel product and service network

Vacon currently manufactures AC drives in Finland, China, Italy and the United States. Adapting products as close as possible to the customer gives flexible production and short delivery times.

Vacon AC drives are sold in more than 100 countries. We have subsidiaries, business partners and service centers around the world. We increase our local presence systematically, ensuring good availability of products and service wherever you are.

Vacon grows at a fast pace

For many years, Vacon has been growing two times faster than the global AC drive market. Today, Vacon is one of the biggest AC drives manufacturers in the world. Vacon's main competitors are global conglomerates, for which AC drives are just one product among many.

The growth in the AC drive market is based on rising energy prices, increasing automation, falling electronics prices, and investments in renewable energy generation. There is room for growth in the market, for at the moment only about 10% of the electric motors in the world are controlled by AC drives.



For a complete company profile, read more at www.vacon.com.

CREATING DEPENDABLE SOLUTIONS WORLDWIDE

Our AC drives provide the best possible solutions for gaining remarkable energy savings and achieving total effectiveness in production. Vacon variable speed AC drives also guarantee the quality and functionality in all phases of an industrial process, from raw materials to finished products.

[Photo courtesy of SES]



VACON AFE UNITS ONBOARD GEO CELTIC

Norway – The world’s largest seismic research ship Geo Celtic is powered by diesel-electric propulsion that is designed by Vacon’s system integrator partner in Norway, using Vacon’s liquid-cooled Active Front-End technology. Vacon AC drives sail on all seven seas, from cruise liners and tankers to fishing boats, in propulsion, winch, thruster, ventilation, pump, drilling, and cargo handling systems.

[Photo courtesy of Golf Hotel]



VACON PLAYS INTEGRAL PART IN BUILDING AUTOMATION

Slovenia – The beautifully renovated Hotel Golf and wellness center Ziva in the heart of Bled, near Ljubljana, use a modern Building Management System with Vacon AC drives. Vacon is able to provide substantial savings in energy consumption and total life-cycle costs as well increased comfort for guests and visitors to hotels, offices, and commercial and public buildings.

[Photo courtesy of Fiss]



EXCLUSIVE SKIING IN A TYROLIAN TOP RESORT

Austria – The Fiss top ski resort in Austrian Tyrol selected Vacon variable speed AC drives for controlling their ski lifts and snow-making machinery. Doppelmayr designed an exclusive drive system in cooperation with Vacon to run the lift motors at Schönjochbahn in Fiss. Vacon AC drives are well suited to any OEM’s needs. Vacon drives are used, for instance, in all kinds of escalators and lifts in residential buildings, skyscrapers, hotels, and offices.

[Photo Courtesy of Corus and Electroproject.Aandrijfttechnik]



MASSIVE GRABBER CRANE IN CONTROL AT CORUS IJMUIDEN

The Netherlands – Since December 2006, Vacon’s liquid-cooled AC drives have been controlling the hoist and trolley travel of one of the cranes at Corus IJmuiden, a system engineered by Vacon’s system integrator partner. Vacon AC drives play an important role in all parts of the world from simple chain hoists to the largest gantry cranes controlling every movement in material handling, process industry, ship-to-shore and offshore operations.

[Photo courtesy of ScanWind AS.]



POWER OUT OF THIN AIR

Norway – One of the world’s biggest wind turbine system using a gearless permanent magnet generator started operation in a wind park 200 km north of Trondheim, Norway in October 2005. The 3.5-MW gearless wind turbine, supplied by a Norwegian system integrator, is based on using full-size Vacon’s liquid-cooled NXP inverters and can utilize all available wind speeds, from very weak to very strong.



ACCURATE POSITION CONTROL IN BOTTLE STACKING

Italy & Spain – Bottling companies Acqua Minerale San Benedetto SpA with plants near Venice (Italy) and Coca-Cola Company with plants near Seville (Spain) use Vacon AC drives in accurate position control. Vacon drives offer many possibilities for machine builders of material handling systems for storages, logistics centers as well as automation and production lines.



VACON IN PUMP CONTROL IN ST. PETERSBURG

Russia – SUE “Vodokanal of St. Petersburg” relies on 228 Vacon AC drives which control pumps, fans and decanters at the pumping stations and water treatment plants in the city of 5 million people. Vacon AC drives are also widely used in fresh water, wastewater, irrigation and desalination applications, for instance in historical cities and modern metropolises.



300 VACON DRIVES AT UPM CHANGSHU MILL

China – The world’s biggest and fastest paper machine for uncoated fine papers at UPM Changshu, near Shanghai uses Vacon AC drives to control pumps, fans and conveyors at their site. Vacon offers robust and reliable single-drive and sectional drive solutions for system integrators to be used e.g. in pulp and paper as well as in mechanical wood processing.

[Photo courtesy of LKAB]



VACON DRIVES AT LKAB IN KIRUNA

Sweden – LKAB, a world-leading producer of upgraded iron ore products, runs Vacon variable speed AC drives at their concentrating and pelletizing plants to control pumps, fans, conveyors and feeders. Vacon’s AC drive solutions are used worldwide for controlling processing of metals and minerals from iron to platinum, from the highest hilltops to the deepest undergrounds.

[Photo courtesy by Unica - Sugar Cane Industry Union]



VACON AC DRIVES SAVE ENERGY IN SUGAR INDUSTRY

Brazil – Brazilian sugar cane manufacturer Usina Continental chose Vacon’s Active Front-End technology for its retrofit project at their plant in Colombia, Sao Paulo. Vacon has delivered a wide range of AC drives for the food and beverage industry, covering the whole processing chain from fertile fields to gourmet dishes.



DISTRICT COOLING PLANT RELIES ON VACON AC DRIVES

Finland – Helsinki Energy, Finland’s largest supplier of district heating and cooling, has chosen Vacon AC drives with the total power of 3 MW to be used in various pump applications at their district cooling plant in Salmisaari, Helsinki. Vacon has a versatile offering of products for all power generation systems, using fossil fuels or state-of-the-art windmill technology.

Vacon solutions are available for all branches of industry. Learn more at www.vacon.com.

VACON EXCELLENCE FROM 0.25 KW TO 5 MW

Vacon's broad product portfolio and passion of staying in the product leadership require long-term R&D efforts. Vacon is aiming to make AC drives more suitable for different customer applications so that more and more customers can reduce their energy usage with AC drives. Currently, Vacon is placing increasing emphasis on eco-friendly factors in the choice of raw materials for AC drives and in its production processes.

COMPACT AC DRIVES

Vacon's compact drives are easy to use and offer basic features for general applications. These drives are designed for fast and easy commissioning. For OEM customers, they offer optimum standard configurations but also versatile tailorability for customer-specific needs.



The Vacon NXL is a compact AC drive for industrial and residential purposes.

The Vacon 10 is an extremely compact AC drive that offers ultimate flexibility in integrating customer requirements into the AC drive.

The Vacon 50X combines power and the best enclosure in the industry. The standard IP66 enclosure is perfect for extreme operating conditions where dirt and liquids can destroy an AC drive.

MULTIPURPOSE AC DRIVES

Vacon's multipurpose drives are designed for continuous heavy use with more features and high flexibility. Designed to the highest standards with a full range of enclosures for all environments, they offer robust and reliable operation for years.



The Vacon NXL is a multipurpose AC drive for industrial and residential purposes.

The Vacon NXS is a powerful AC drive for use in machines, buildings and all branches of industry.

The Vacon 500X offers the same high IP66 protection as the Vacon 50X but adds multiple interface options and other advanced functions for the more demanding applications.

The Vacon 100 HVAC is a versatile AC drive dedicated to heating, ventilation and air conditioning. It is suitable for pump, fan and compressor applications.

INDUSTRIAL AC DRIVES

Vacon's industrial drives have been designed to provide the best possible reliability and availability of a machine or a process under all circumstances for the entire lifetime of the system.



The air-cooled Vacon NXP is a state-of-art AC drive for use in various applications where robustness, dynamic performance, precision and power are required.

The liquid-cooled Vacon NXP is our most space-saving AC drive, well suited for locations where air-cooling would be difficult or expensive, or where the installation space is at a premium. Total space savings of up to 70% can be achieved.

The enclosed Vacon NXC drive is designed to meet the most demanding requirements on flexibility, robustness, compactness and service-friendliness.

The Vacon common DC bus product portfolio fulfills all solution demands with a flexible architecture, covering a number of front-end units, inverter units and brake chopper units.

COMPACT AC DRIVES

Vacon NXL
0.37 – 2.2 kW



Vacon 10
0.25 – 5.5 kW



Vacon 50X
0.75 – 132 kW



MULTIPURPOSE AC DRIVES

Vacon NXL
0.75 – 30 kW



Vacon NXS
0.75 – 200 kW



Vacon NXS standalone
200 – 560 kW



Vacon 500X
4 – 132 kW



Vacon 100 HVAC
1.1 – 30 kW



INDUSTRIAL AC DRIVES

AIR-COOLED
Vacon NXP
0.75 – 3,250 kW



LIQUID-COOLED
Vacon NXP
5.5 – 5,300 kW



ENCLOSED
Vacon NXC
110 – 3,250 kW



COMMON DC BUS COMPONENTS up to 5,300 kW

- active front-ends
- non-regenerative front-ends
- fundamental front-ends
- inverters
- brake choppers

AIR-COOLED



LIQUID-COOLED



For further details and technical specifications, read more at www.vacon.com.

STAYING COMPETITIVE IN YOUR BUSINESS

When you make an investment decision for AC drives, a certain amount of planning, research and development has already taken place. The choices to be made will have an impact on the total life-cycle cost. Vacon's strong experience in diverse industries allows us to offer customers solutions that lower their total cost of ownership. In fact, we have probably already faced many similar scenarios you are pondering. We are able to be your reliable partner for the entire life span of your investment.

Your challenge is our mission

You face a challenging task of being the leader in your business. The changing world requires new ideas in marketing, technology, production and delivery chain to keep the business growing and profitable. This ever-changing environment demands you to improve your efficiency and to provide support and long-term services for your customers that they can also stay in the lead.

Our proven partner network worldwide

Vacon operates close to customers worldwide and supports them as locally as possible, with the proven network of system integrators, value-added resellers, distributors, and original equipment manufacturers. We are an independent supplier and able to cooperate with the leading, best-of-breed automation, electrification, and motor suppliers.

Our way of working

Vacon focuses on the entire life-cycle of AC drives from R&D to after-market services. Similarly, Vacon's experts understand the important stages of the customer's business. Vacon's expertise is at the customer's disposal in all cases that affect the customer's total cost of ownership.

- Technical evaluations for new investment decisions
- New product development studies
- Project evaluations
- Energy saving calculations
- Selecting suitable products for the required applications and solutions
- Project engineering
- Start-ups and commissioning
- Training
- Logistics and after-market services
- Migration and revamping
- Decommissioning

TECHNICAL EVALUATIONS →

ENERGY SAVING CALCULATIONS →

PRODUCT SELECTION →

PRODUCT ENGINEERING →

VACON TRAINING

VACON AFTER-MARKET SERVICE OFFERING

Vacon offers a wide range of services for its customers. By choosing these services you are guaranteed to receive the best possible Vacon expertise and service to support your business. Vacon services will be performed by highly skilled and trained professionals.

VACON START

Vacon Start ensures a safe and reliable commissioning and start-up for your AC drive.



VACON TRAINING

The Vacon Training Centers offer a comprehensive selection of training courses that provides you with the skills needed when selecting, using, programming, commissioning, maintaining or repairing Vacon AC drives.



VACON PROACTIVE MAINTENANCE

This is our scheduled maintenance program that secures the availability of the AC drive. Necessary maintenance, repairs and upgrades will be performed at the best possible moment.



Training is adjusted according to the participants' needs and competence levels, using the most suitable teaching methods and techniques. Training courses are arranged worldwide on a regular basis and on-demand.

VACON REPAIR

This service provides unit repairs for customers. The repairs will take place at a Vacon Service Center or at the customer site by Vacon service personnel.



VACON 24/7 TECHNICAL ASSISTANCE

Vacon Technical Assistance offers on-call technical support 24 hours a day, seven days a week for any technical problem with the Vacon AC drives. The technical assistance is provided by Vacon technical support engineers and authorized Vacon partners worldwide.



VACON PROACTIVE MAINTENANCE → VACON REPAIR

VACON TRAINING

VACON 24/7

Do not settle for a conventional solution. Ask for more. Ask for Vacon at www.vacon.com.

VACON – CLOSE TO YOU

Vacon is at your service everywhere in the world. We have offices in 27 countries worldwide and production facilities in 4 countries on three continents. Over 100 distributors and over 70 service partners encompassing more than 100 countries make Vacon a truly global partner with strong local presence.



VACON GROUP FINANCIAL FIGURES 2004–2008

Vacon grows faster than the market. Vacon's revenues have been growing from year to year. In the past few years, the revenues have been growing over 20%. In the long term, Vacon aims to grow at an annual rate of 15–20%, but without putting profitability at risk.

REVENUES BY MARKET AREA 2008



REVENUES BY DISTRIBUTION CHANNEL 2008

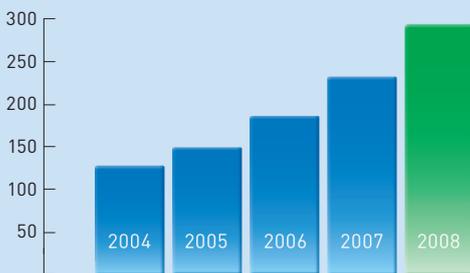


Yours is the next step

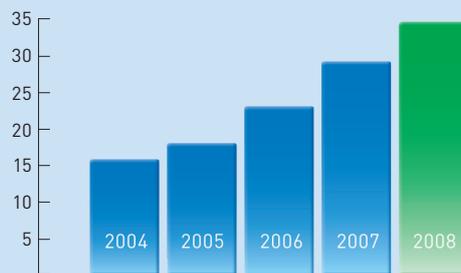
The experienced Vacon professionals help you in making the right choice of Vacon for your specific needs. Vacon offices and all our partners are at your service all over the world. You can find our full contact details at www.vacon.com where you can also fill in a contact request card and we will find the right people to support your business.



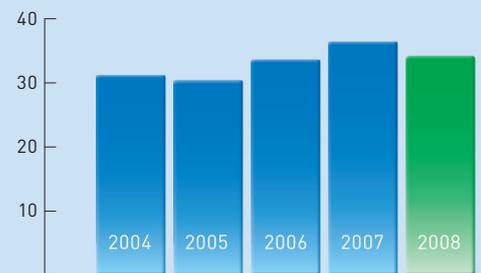
REVENUES, MEUR



OPERATING PROFIT, MEUR



RETURN ON EQUITY, %



The contact details of Vacon's comprehensive partner network can be found at www.vacon.com.



www.vacon.com

Vacon Partner