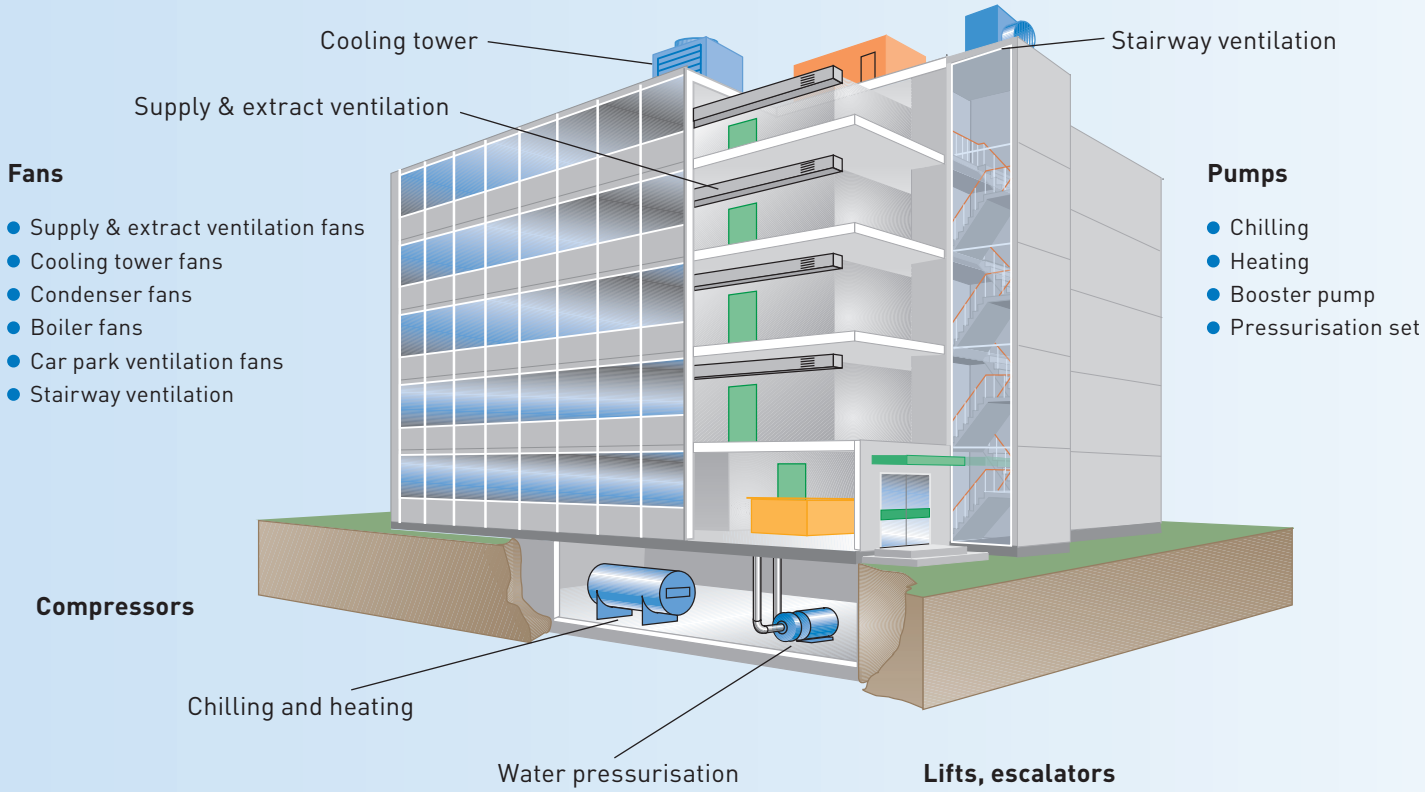
VACON AC DRIVES
COMFORT & CONTROL IN BUILDING AUTOMATION

vacon
DRIVEN BY DRIVES



Today's buildings are sophisticated environments with demanding requirements for comfort and control. A typical office building houses hundreds of pumps and fans controlling the heating, ventilation and air-conditioning covering thousands of square meters in hundreds of rooms. Together with high energy efficiency demands this leads to need for advanced control features and high reliability.

Vacon's professional and innovative personnel offer the complete power range for building automation, with global sales, support and service network. Our drives can substantially improve the quality and efficiency of the heating, ventilation and air conditioning of your building.

Energy savings

Rising energy prices and environmental legislation energy efficiency are key issues when designing buildings. Use of the Vacon AC drives for flow and pressure control instead of dampers or valves gives substantial energy savings resulting in short payback time of the initial investment.

User-friendly

The Vacon AC drive is a compact package and still have everything necessary integrated as standard. Together with well-designed mechanical construction and easy usability, this will minimize your installation time.

System integration

The flexible connections with multiple fieldbuses, serial interfaces and expandable I/O together with proper information and diagnostics are the native features of all Vacon AC drives. Comprehensive run-time self-supervision and alarm systems enhance the reliability and safety.

Comprehensive support and service

Our local and global service network gives a fast and professional response wherever and whenever it is needed, 7 days a week, 24 hours a day.

Environment-friendly

In direct online starts, the equipment is subject to a high stress. Vacon AC drives gradually ramp the motor up to the operating speed, decreasing the mechanical stress. The extended lifetime of the mechanics also means lower maintenance and repair costs.

Using single-speed starting methods results in abrupt motor starts and in a high level of current from the supplying network to the motor. Using Vacon AC drives, the current from the supply will be much lower, and the high starting torque is still available when needed.

High speed, especially in fans, is the major source of noise. Vacon AC drives adjust the speed of the motors to the optimum, therefore reducing the level of noise.

PROVEN TECHNOLOGY FOR BUILDING AUTOMATION

The Vacon NX product family is designed to fulfil the requirements of all building automation needs with a single product line.

Quality and reliability

- Each drive tested at maximum temperature and at full motor load prior to shipment
- All drives made of high-quality components for long lifetime
- Comprehensive run-time self-supervision and alarm system for enhanced reliability and safety

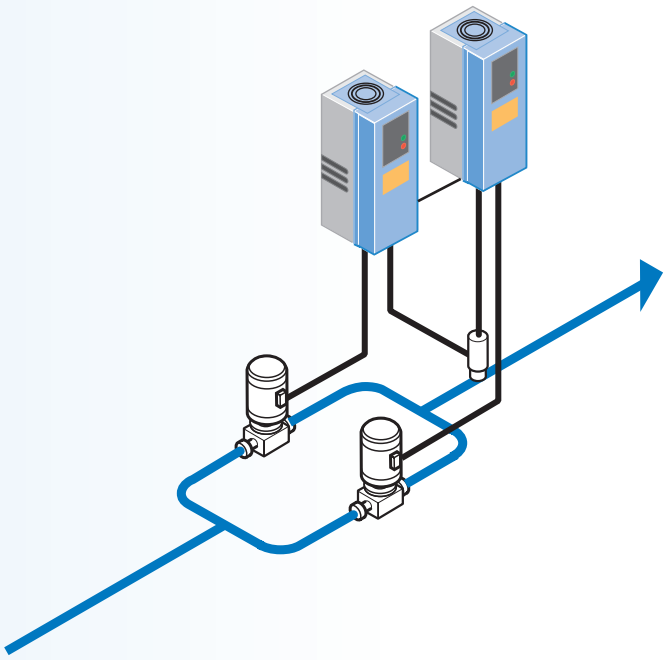
Versatile control and integration

- Flexibility in communication via multiple fieldbuses (Lon, Ethernet, N2, Modbus, ...)
- A large selection of I/O cards available for different applications
- Stand-alone applications available, i.e.
    - o Integrated PID
    - o Multiple pump and fan PFC solutions
    - o PID with firemode (safety requirements)
- Flux optimisation for reduced energy consumption
- Parallel operation of motors with a single AC drive

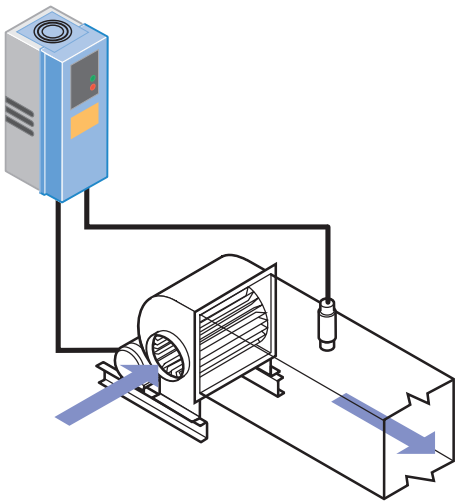
Easy installation, commissioning and service

- Integrated RFI filters for 1st environment EMC requirement
- Integrated AC choke for maximum protection and minimum harmonics
- Compact, IP54/IP21 same dimensions
- Start-up wizard
- Dedicated preset parameters
- Versatile PC tools for loading, setting and comparing parameters and calculating energy savings
- Parameter back up
- Separated power and control for fast service
- Easily changeable fan
- Fault logger with fault time monitoring data

Multimaster PFC - Dedicated solution for multiple pumps/fans



Stand-alone PID fan control as standard



MAKE THE PERFECT CHOICE

When making important decisions, you want to be sure and confident that your choice is right from the very beginning. Your choice of Vacon guarantees that you can sustain and improve your competitive power.

To choose the right Vacon AC drive for your needs, the experienced Vacon personnel is pleased to assist you in making the right decision. We know there are several issues to consider. Therefore, we have the know-how and willingness to help you to concentrate on the essentials.

Dimensioning

The load conditions of your application (pump, fan and others) and the ambient temperature are the two main factors that affect most the correct rating for the drive.

- starting torque
- variable/constant torque
- overloadability
- ambient temperatures (40°C, 45°C, 50°C and others)

Functionality

The application-specific requirements determine the number of inputs and outputs, control and monitoring principles, and the suitable software application.

- level of performance (torque accuracy, response times)
- system integration
- control logic
- necessary I/O
- fieldbuses
- multiple pump and fan control
- PID control

Standards

Installations must be designed and carried out according to the safety and other regulations. Compliance with standards ensures that the drive operates properly in the given environment as specified.

- emissions and immunity (EMC)
- RFI
- harmonic currents and voltages
- low-voltage and machine directives
- degree of protection (IP classes)
- CE, UL, C-UL and other approvals

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