



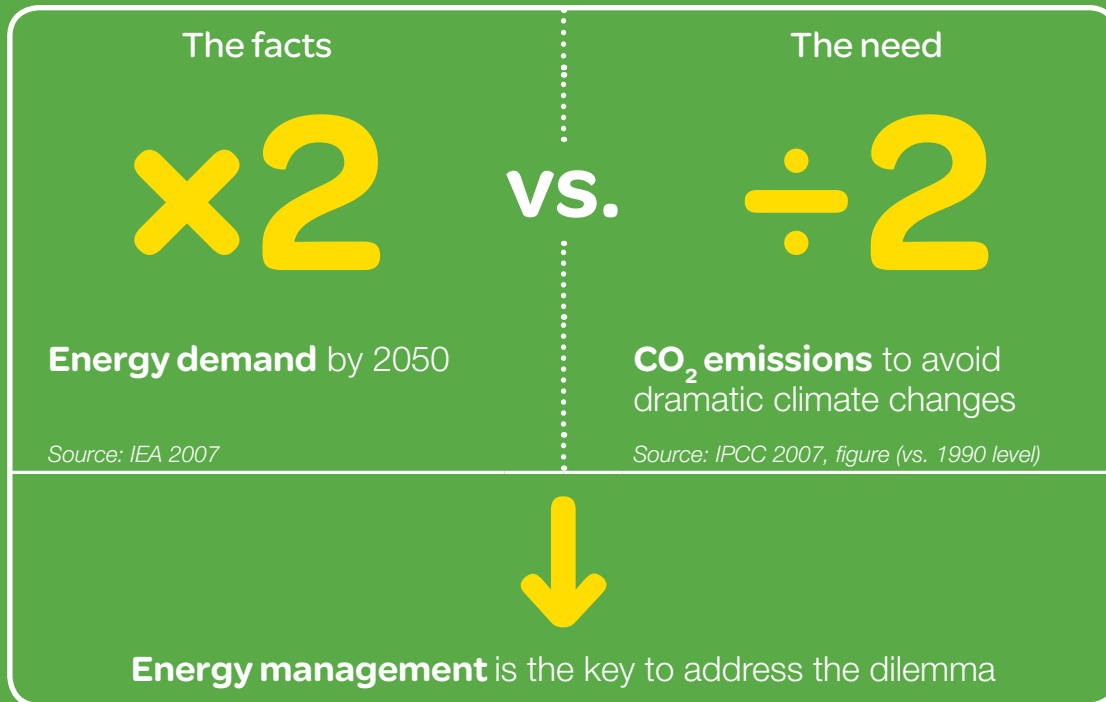
Up to 70% savings on the  
energy bills for your motors!

Save money on your pump, fan and compressor solutions

Make the most of your energy<sup>SM</sup>

**Schneider**  
 Electric

# The energy dilemma



With energy demand on the rise and federal and international regulations evolving to reduce our global carbon footprint, a viable energy management solution is paramount. Your first area of focus should be motors that control pumps and HVAC systems. Research shows that motors consume:

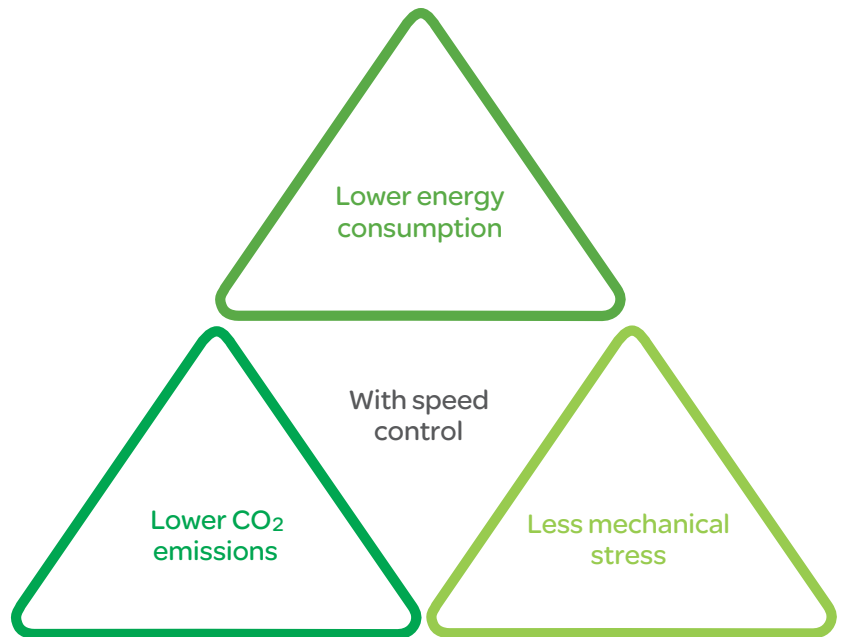
 **30%** of the energy of a **building**

 **60%** of the energy of **industries** and **infrastructures**

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 **85%** of electric motors control pumps, fans and compressors.

Achieve **energy savings of up to 70%**, depending on the type of installation, for pumping, ventilation and compression applications with **Altivar® variable frequency drives**.



- Higher efficiency and better performance than traditional mechanical solutions
- Eco friendly
- More reliable and low maintenance
- Greater comfort



A rapid return on investment  
(generally less than 24 months)

# Measurable savings with the Altivar product range

Compare two fluid control techniques that are commonly applied to pumps, fans and compressors to understand the advantages that Altivar variable speed drive solutions can provide.

## Conventional pump solution with valve



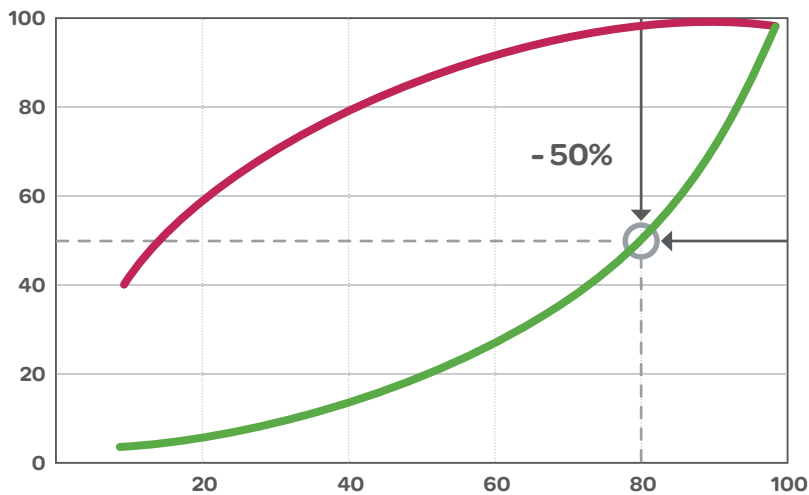
- The motor constantly runs at full power, supplied directly by the line supply
- The flow is controlled by the position of the valve
- The poor efficiency of the valves amplifies the losses

## Increased productivity with variable speed drives



- Improved efficiency by doing away with the mechanical device
- Motor speed adjusted to demand, reducing energy consumption

### Power consumed



— Traditional solution with valves

— Solution with Altivar variable speed drive



At **80%** flow, power consumption falls by **50%** with the variable speed drive

# Increase your productivity with the Altivar product range

The highest potential energy savings are to be found on pumps, fans and compressors. Variable speed drives offer additional advantages for each application.



## Compressors: up to 30% energy savings

- Manages a constant pressure
- Increases service life of the compressor
- Controls the current on starting
- Minimizes pressure surges
- Lowers maintenance



## Pumps: up to 50% energy savings

- Reduces mechanical stress by eliminating pressure surges
- Delivers precise control according to changing requirements (temperature, flow rate, pressure)
- Provides protection of the pump and your pipes
- Ability to manage multiple pumps



## Fans: up to 70% energy savings

- Provides more precise control of the system
- Reduces noise level in installations
- Improves control of air quality
- Reduces maintenance costs on belts and bearings

# Designed for usability and performance

A complete range of variable speed drives for fluid control and processing

## AC drives provide:

- Integrated motor protection for greater safety
- Integrated communication for easy diagnostics
- Application-specific functions: smoke extraction, multi-pump and PID
- Damper feedback

## > Altivar 21 drives

Compact size and economical

### Building applications

1 HP to 100 HP, three-phase, 230 V and 460 V



- Designed for commercial pump and fan applications
- Reduced installation costs
- Building management network connectivity
- Reduced harmonic technology
- Compact: side-by-side mounting

## > Altivar 61 drives

Modularity and ease of control

### Industry and infrastructure applications

1 HP to 900 HP, single-phase and three-phase, 230 V, 460 V and 575 V



- Type 1 or Type 12 available
- Connectivity to most fieldbus
- Multi-language graphic display terminal
- Option cards: I/O and programmable
- Multi-pump management

## Enclosed packaged AC drives provide:

Integrated controls protected within enclosures optimized with:

- Disconnect means
- Circuit breakers
- Push buttons
- Selector switches
- Control logic
- Communication
- And numerous other options to meet your application requirements

## > S-Flex™, E-Flex™, M-Flex™, Powergard™ and MCCs



- Variety of enclosure ratings: UL Type 1, Type 12/12K, Type 3R
- Standard, configurable and customizable products to fit your needs
- Mitigate harmonics with an 18-pulse option
- 100 kA short circuit protection
- Choice of DC chokes or line reactors
- Seismic rated

# Schneider Electric, your energy expert

## The audit

- Identify opportunities for saving energy
- Fine-tune a selection of solutions for achievable savings
- Calculate the return on investment

## Associated services available

- Measurement and analysis of your consumption (before and after modifications)
- Installation of variable speed drives
- Power factor correction
- Setup and training of your teams
- Building management system for your HVAC, lighting systems, etc.
- Follow-up and commitment on achievable savings

Identification of savings you could make on your pumps, fans and compressors according to the application. See the Eco2 website for more information.

Economical



## Eco2: savings you can measure via your keyboard

Schneider Electric provides you with tools to estimate the potential savings of energy consumption when you install Altivar variable speed drives on your pumps and fans:



- Calculate the savings you could make: annually in kWh, dollars and ton of CO<sub>2</sub>
- Estimate how long it will take to get a return on your investment\*
- Compare the energy consumption with and without a drive
- Select the most suitable Altivar variable speed drive for your installations

\* Results generally recorded, not contractual



Download **Eco2** free of charge from [www.us.Schneider-Electric.com/Drives](http://www.us.Schneider-Electric.com/Drives)

# Talk to someone you can trust



The Altivar family of variable speed AC drives presents the most advanced and user-friendly solutions in the marketplace. Featuring proprietary motor control algorithms to achieve optimal reaction times and complete scalability to match your application requirements for speed, size and protection, the complete line of Altivar products provides the flexibility and performance to:

- Meet the needs of a broad range of industries, including HVAC, pump, material handling, hoisting, packaging and many more.
- Reduce your energy costs using proprietary energy-saving technologies available only from Schneider Electric.
- Improve your up-time by simplifying installation, configuring and maintenance by providing advanced diagnostics, industry-leading voltage ride thru capability and seismic qualified products.

We also work with you to deliver the benefits of a global service and support organization to further increase the value of working with Schneider Electric. Our product specialists, industry experts, distributors, partners and the countless other members of the Schneider Electric family are dedicated to helping you reduce energy usage everyday. Contact your local sales representative today to learn how Schneider Electric can improve operational performance and help your business to achieve a competitive advantage. Or visit [www.us.Schneider-Electric.com/Drives](http://www.us.Schneider-Electric.com/Drives).

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