

# Altivar® 61 Variable Speed Drive

More than half of a building's energy is associated with pumps and fans. Variable speed drives (VSDs) can mean big savings.



Exceptional  
Performance



Advanced  
Functions



Reduction in  
Energy Usage

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

**Schneider**  
Electric

# Easy-to-use design with evolutionary features and functions



The Altivar 61 AC drive defines ease of use for variable speed drives used in centrifugal pump and fan applications by offering the most advanced range of features, functions and flexibility. Its evolutionary design reduces installation, start-up and maintenance time while providing a user-friendly interface, exceptional connectivity and reliable operation in a wide range of applications.

## Connectivity made easy

The Altivar 61 drive provides connectivity to the major building automation networks including Lonworks, BACnet, Metasys N2 and Apogee P1, as well as other industrial networks. It can be internally fitted with the Water Solutions multi-pump option card to expand this connectivity to manage multiple pump installations or fitted with the “Controller Inside” option board, which allows custom programming via the IEC 1131 programming methods.

## Simple operation

An intuitive and customizable graphic keypad makes setup and configuration of the Altivar 61 drive extremely quick and easy. The large screen, customizable display and easy-to-use navigation wheel simplify programming, as do plain text menus available in six different languages (English, Spanish, French, Chinese, German and Italian).

Additionally, “Simply Start” menus and function keys put the most common parameters in one place and at your fingertips. And the ability to save programs to the portable keypad allow you to quickly transfer programs from one drive to another for even greater time and cost savings.



The Altivar 61 offers exceptional performance and advanced functions which allows custom programming.

# 30% of your total energy consumption is consumed by your HVAC system



## Adapting to your needs

Hot or cold; summer or winter; at home or at work; we all want to be comfortable. That's the driving force behind the constantly evolving HVAC marketplace. Your buildings heating, ventilation and air conditioning system accounts for 30% of your total energy consumption. And often people still complain about it being too warm or too cold.

### Use the Altivar 61 drive in:

- Commercial buildings
  - Supply fans for HVAC systems
  - Cooling tower fans
- Industry
  - Ventilation fans exhaust/smoke extraction
- Power
  - ID fan

### Key functionality to these industries

- Built-in PID functionality
- Unique random switching frequency modulation reduces noise pollution from the motor and enhances comfort
- Broken belt detection
- Skip/jump frequencies to avoid resonance
- Loss of follower with alarm management
- External fault input
- Eliminate gear box backlash and cogging
- Fault inhibition and fireman's override to use the forced start function
- Run permissive damper input
- Catch on the fly by speed during restart, regardless of the direction of rotation



The Altivar 61 drive also adds flexibility, performance and efficiency to your HVAC system by adapting the fan speed to the needs of your facility.

Integrated with your building's automation system, the Altivar 61 drive can control airflow to specific areas, regulating delivery or ventilation based on the need to maintain a constant set temperature that is neither too hot or too cold. This reduces energy consumption while at the same time improving performance and comfort.

# Pumping applications are liable for 20-25% of the world's energy

## Adjusted to your demands

Pumps can be found in homes, offices and factories, and are critical to the operations of ships, mines, farms, water wastewater facilities, golf courses and countless other industries both big and small. With pumps playing such a critical role in our lives, optimizing their performance becomes essential.

### Use the Altivar 61 drive in:

- Water wastewater industry
  - Pump stations, booster stations and lift stations
  - RAS/WAS pumps, raw water and finished water pumps, and influent and effluent pumps
- Commercial buildings
  - Booster stations
  - Fresh water/gray water circulation
  - Boiler feed pumps
- Industry
  - Mining: dewatering
  - Marine: ABS certifications
- Irrigation
  - Agriculture
  - Turf management: residential, commercial and professional

### Key functionality to these industries

- Built-in PID functionality
- Limitation of operating time at low speed
- PTC probe management
- Auto-restart function with configurable response time
- Underload and overload detection
- Low-flow detection
- Sleep/wake function
- Power used, power-on time and motor run time
- Water Solutions card integrates function into the VSD designed for pumping needs
- “Controller Inside” on-board controller enables customizable pumping solutions



**Altivar 61 drive can significantly reduce your energy consumption by adjusting pump speed to meet your exact demand, as well as reducing inrush current.**

This reduces mechanical stresses, prolongs pump life and delivers more reliable application performance by offering a constant pressure system.

# What the Altivar 61 drive does for you

## Complete offer

Numerous options across a wide horsepower range give you the flexibility to choose the right product for your needs without sacrificing performance or familiarity.

- 200-240 V: 1-30 HP, single-phase
- 200-240 V: 1-125 HP, three-phase
- 380-480 V: 1-900 HP, three-phase
- 500-690 V: 3-800 HP, three-phase
- Certification for UL, CSA, CE, C-Tick, GOST, ATEX DNV and ABS to simplify worldwide compliance
- IP20, UL Type 1, or IP54/UL Type 12

## Advanced protection

- Incorporates Level A conducted and radiated EMC filters
- Establishes conformity of the machines for CE and UL marking, without additional costs
- Offers thermal protection, integrated electronic thermal relay and surge limitation

## Open design

- Integrated Modbus® and CANopen ports
  - Simplifies installation
- Saves on cabling
  - Improves data exchange transfer rates
- A wide range of additional communication cards allow the Altivar 61 drive to connect to industrial and building automation networks
- The Water Solution application card manages the use of multiple pumps with one drive to more efficiently meet demand while maintaining pressure.
- The “Controller Inside” programmable card handles more advanced functions, often eliminating the need for a PLC while also reducing response time, cost and cabinet space

## Type 12 enclosure (optional)

For applications needing a more robust enclosure rating for dusty environments, the Altivar 61 drive is available in a Type 12 enclosure. This offer is available up to 125 HP for the 460 V range. It is designed to be mounted on the wall or near the motor to eliminate the need for additional enclosures.



Altivar 61 Drive



Type 12 Enclosure

## Water Solutions multi-pump card

The Water Solutions multi-pump control card helps prolong the service life of an installation as well as reduce the energy and water consumption by controlling the speed of one pump and completely managing the on-off control for up to three other pumps with contactor or soft-starter control. It offers predefined pump control features that can be tailored to the individual pump sites or equipment through control algorithms embedded in the card and programmed using the plain text menu and graphical keypad of the Altivar 61 drive.

### Features:

- Multi-pump stage control based on: drive speed and/or set point and/or stage delay
- Jockey pump control used to maintain minimum pressure during time of low demand
- PID control
- Pump cavitation detection and response
- High/low pressure detection
- Pressure sensor input with range configuration and scaling
- Temperature sensor input with range configuration and scaling
- Flow sensor input with range configuration and scaling
- Pump impeller anti-jam function
- Pipe-fill function
- Frost-protection function
- Sleep modes
- Night/day operating mode
- Management of relative operating time
- Timed pump sequences
- Display individual pump run time
- Selectable fault responses

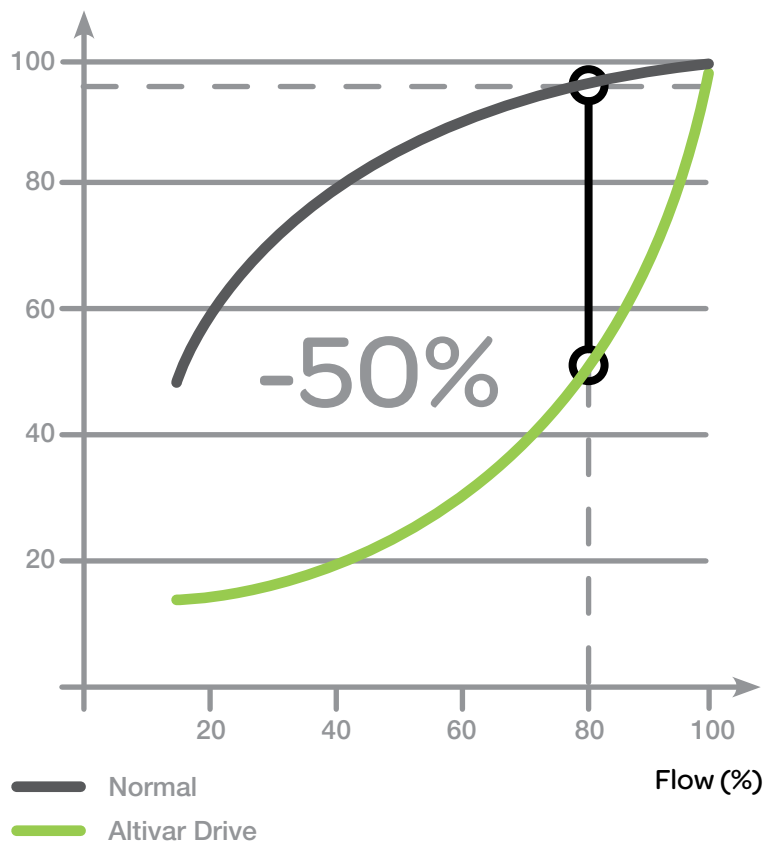


### Environmentally friendly

- Exceptional energy efficiency
- RoHS compliant
- Built with 88% recyclable components
- Developed in factories certified for using eco-design principles

# Energy savings: The numbers don't lie

Consumption (%)



- World energy consumption has risen **45%** since 1980 and it is projected to be **70%** higher by 2030!
- Pumps consume over **20%** of the world's energy.
- The HVAC system accounts for up to **50%** of a commercial business's electric bill.
- At **80%** of nominal flow, the power consumption is reduced by **50%** when using an Altivar 61 drive.

## Remarkable performance

- Energy economizer motor algorithm to maximize energy savings, or select two or five point volts/Hz profile
- Catch-on-the-fly restart
- Three skip frequency bands
- Up to 110% overcurrent
- Under voltage ride-thru qualified to SEMI-F47

## Talk to someone you can trust

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

Contact your local sales representative today to learn how Schneider Electric can improve operational performance and help your business improve your competitive advantage. Or visit [www.us.Schneider-Electric.com/Drives](http://www.us.Schneider-Electric.com/Drives).

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