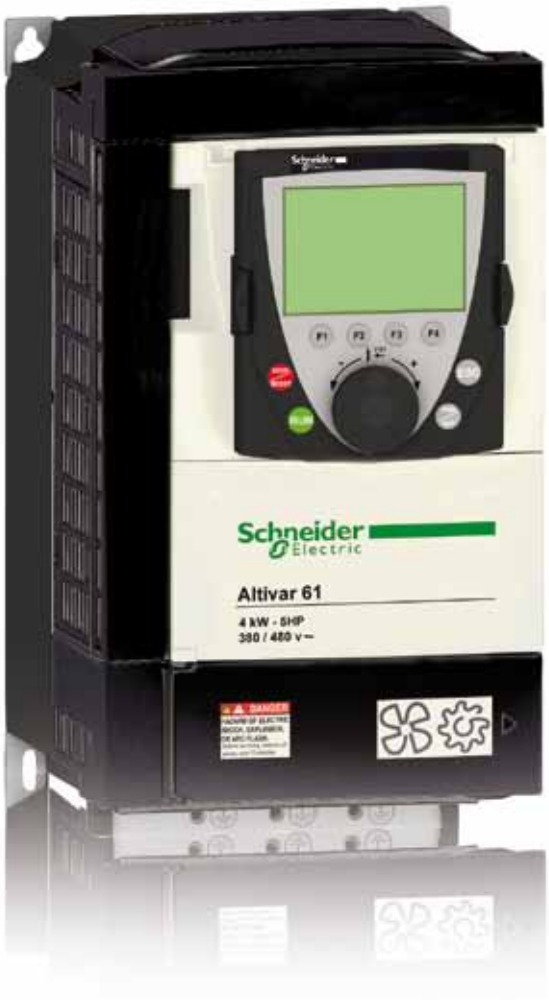
Buildings and infrastructures

Energy savings and performance

for your pumps and fans



Altivar 61

Variable speed drive with variable torque
for 3-phase asynchronous and synchronous motors
0.37 to 2400 kW - Power supply up to 690 V

Schneider Electric

Exceptional versatility from the smallest application to the highest power rating

Flexible + High-performance

Rugged + Communicative

Better communication

- Connectivity to all fieldbuses (integrated Modbus and CANopen)
- Multi-language graphic display terminal

More flexible

- Option cards: programmable I/O
- Controller Inside card: openness to a distributed architecture

More powerful

- Multi-pump management
- Saves energy
- Optimises automation solutions with its seamless integration into the architecture
- Suitable for a wide range of power ratings (0.37 to 2400 kW)
- Integrated safety function

More rugged in harsh environments

- 3C2 reinforced version, standard IEC 721-3-3(gas, liquids), IP20/IP54
- Versions with water cooling
- IP54/IP55 wall-mounted or floor-standing enclosures available
- Complies with ATEX safety standards (explosive environments)

70%* energy savings on fans
50%* on pumps

Cooling tower fan system

Air purification and smoke extraction system in a road tunnel

Multi-pump solution

Designed to be eco-friendly:

- Optimises energy consumption according to the load applied to the machine
- Reduces noise pollution
- Avoids interference on the electrical supply: reduction of current harmonics (optional chokes, passive filters, Active Front End (AFE), etc.)
- Eco-designed product compliant with environmental standard ISO 14040
- Reduced need for air conditioning

* Depending on the application

Eco-friendly:

- Altivar 61 is RoHS compliant
- 90% recyclable materials

A complete expandable product

More economical

- A single product for increased performance
- Less wiring
- Protects your installations
- Reduces maintenance costs

More expandable

- Adapts to your machines
- Optimal integration
- Side-by-side mounting capability
- Multidrop connection between graphic display terminal and a number of drives
- Supplied with either a 7-segment display terminal or the remote graphic display terminal

Safer thanks to multiple protection

- Of the motor:
  - thermal protection (PTC probes or integrated electronic thermal overload relay)
  - overcurrent protection
  - mechanical protection: prevents shocks and eliminates resonance
- Of the machine:
  - Power Removal safety function
- Of the drive:
  - self-protection in the event of overheating
  - hardware and software current limit
  - resistant to harsh operating environments
  - drive has ATEX certification so it can control the motor in explosive atmospheres

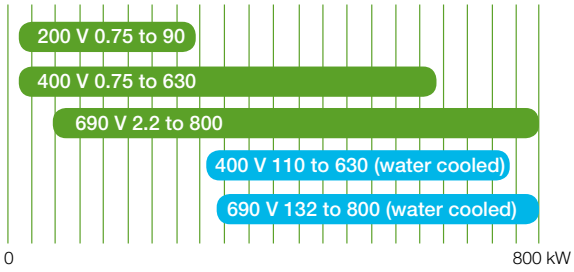
Modular design for greater versatility

A wide range of power ratings

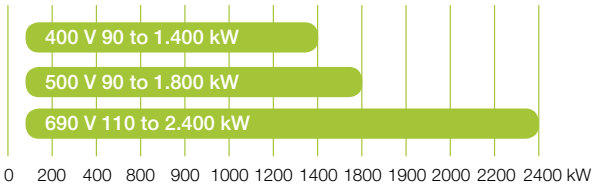
- 1AC 200 to 240 V: Altivar 61 from 0.37 to 5.5 kW
- 3AC 200 to 240 V: Altivar 61 from 0.75 to 90 kW
- 3AC 380 to 480 V: Altivar 61 from 0.75 to 630 kW
- 3AC 500 to 690 V: Altivar 61 from 2.2 to 800 kW
- 3AC 380 to 480 V: Altivar 61Q (water cooled) from 110 to 630 kW
- 3AC 500 to 690 V: Altivar 61Q (water cooled) from 132 to 800 kW
- 3AC 380 to 690 V: Altivar 61 Plus from 90 to 2400 kW

Altivar 61 - Single-phase

Altivar 61 - Three-phase



Altivar 61 Plus - Three-phase



A wide range of functions

- **More energy savings:**
  - Quadratic ratio for control adapted to pumps and fans
- **More economical:**
  - Integrated EMC filter*, simplified installation and bringing into conformity
  - Up to 200 metres of cable without a motor choke
- **Improved safety and efficiency for your network:**
  - Reduction of current harmonics via a solution integrated in the product
- **More openness:** specific I/O for application functions
- **Better continuity of service:** the drive can be controlled separately in 24 VDC
- **Greater flexibility:** 3 types of control
  - Automatic for greater autonomy and better performance
  - Semi-automatic to stay in control of the application at all times
  - Manual to make setup and maintenance easier

A wide choice of option cards

Better performance:

- Multi-pump card for controlling up to 5 pumps:
  - compensates for loss of pressure
  - offers varied functions: closed loop control (PID), sleep/wake-up function, etc.
  - reduces installation costs
  - prolongs the life of your installation: reduction of pressure shocks (pressure surges)
  - manages how long each pump works for
  - reduces energy consumption
- Communication cards (ProfiBus DP, Modbus TCP, Daisy Chain and Plus, DeviceNet, BACnet, LonWorks, Ethernet, APOGEE, METASYS, etc.)
- Programmable controller cards
- I/O extension cards
- Encoder interface cards

* C1, C2, C3 depending on the model

More than 150 specific applications available

Altivar 61Q: improved robustness with water cooling

- Efficient cooling system: 85 to 100% of waste heat is dissipated into the drive water-cooling system
- Reduced need for air-conditioning
- Prolonged maintenance-free operational life
- Excellent protection against corrosion due to stainless steel cooling pipes

Advanced functions for an effective response to every type of application

Increased safety: aeration and smoke extraction

- **Fire function** (forced drive operation) with:
  - fault inhibition
  - selection of rotation direction and the speed reference
- **For high-inertia applications:**
  - high braking capacity up to 1 MW
  - energy regeneration with Active Front End (AFE)
  - catch on the fly by speed searching regardless of the direction of rotation
- **Regulation of CO_2 by integrated** PI regulator

Optimal fluid management

- **Network availability:** management by integrated multi-pump card
- **Constant pressure:** pump starting on request
- **Reduced maintenance costs:** equitable distribution of pump use
- **Simple operation:**
  - detection of overloads and underloads
  - flow limitation
  - sleep/wake-up function (flow detection)
  - diagnostics (broken belt, loss of pump priming, phase loss, power supply fault, etc.)
  - tests
  - etc.

Make sure your network is watertight

40% of distributed water is lost through leaks. The integrated multi-pump card detects and flags up fluid losses in distribution networks.

Save energy

with pressure regulation, the pumps operate on demand.

Increased comfort: disturbance-free ventilation

- **Reduction in noise pollution** caused by fan operation (action on the motor and the machine):
  - skip frequencies
  - switching frequency can be adjusted during operation
  - “white noise” random frequency
- **Energy savings** linked to improvement in application performance

Tools that focus on your applications: dialogue and user-friendliness

Calling all designers, installers, distributors, after-sales technicians, etc: minimise your installation and programming times and cut your costs, with the common platform of tools for the Altivar and Lexium ranges.

Design

- SoMachine programming software
  - Application project configuration management

Setup

- SoMove setup software
  - Direct connection using a USB - RJ45 cable
  - Common platform for Altivar & Lexium
  - Reduction of design and installation costs

Configuration

- Multi Loader
  - Storage and duplication of configurations
- Simple Loader
  - Duplication of configurations

Graphical user interface

- Multilingual remote graphic display terminal
  - Drive configuration, adjustment, diagnostics and maintenance
  - 4 configurations can be backed up
  - Choice of 8 languages as standard and more than 20 others available for download

Remote communication

- SoMove Mobile application for mobile phones

Efficiency

- Downloading, editing and sending of configurations
- Drive adjustment and maintenance
- Configuration files can be sent and received locally or remotely in a matter of seconds
  Safety
- Remote supervision and adjustment of the machine
- No more physical or safety constraints for accessing the machines thanks to the Bluetooth connection
- Backup of changes or reinstallation of saved configurations

Simplicity

- Comfortable working position (access to equipment which is difficult to access manually)
- User-friendly dialogue functions with SoMove Mobile™
- Contextual navigation through the menus
- Sharing of configuration files via MMS or e-mail

More than 20 languages available

Altivar 61
Integrated and integrable protection

IP54 product solution

- 0.75 to 90 kW/380 V to 480 V
- Enclosed product
- EMC C1 or C2
- With or without Vario switch

Preassembled kit in IP54 enclosure

- 110 kW to 800 kW/380 V to 480 V
- Enclosure supplied in kit form
- Cost and time savings (thermal tests and IP54 certified)
- Simple assembly

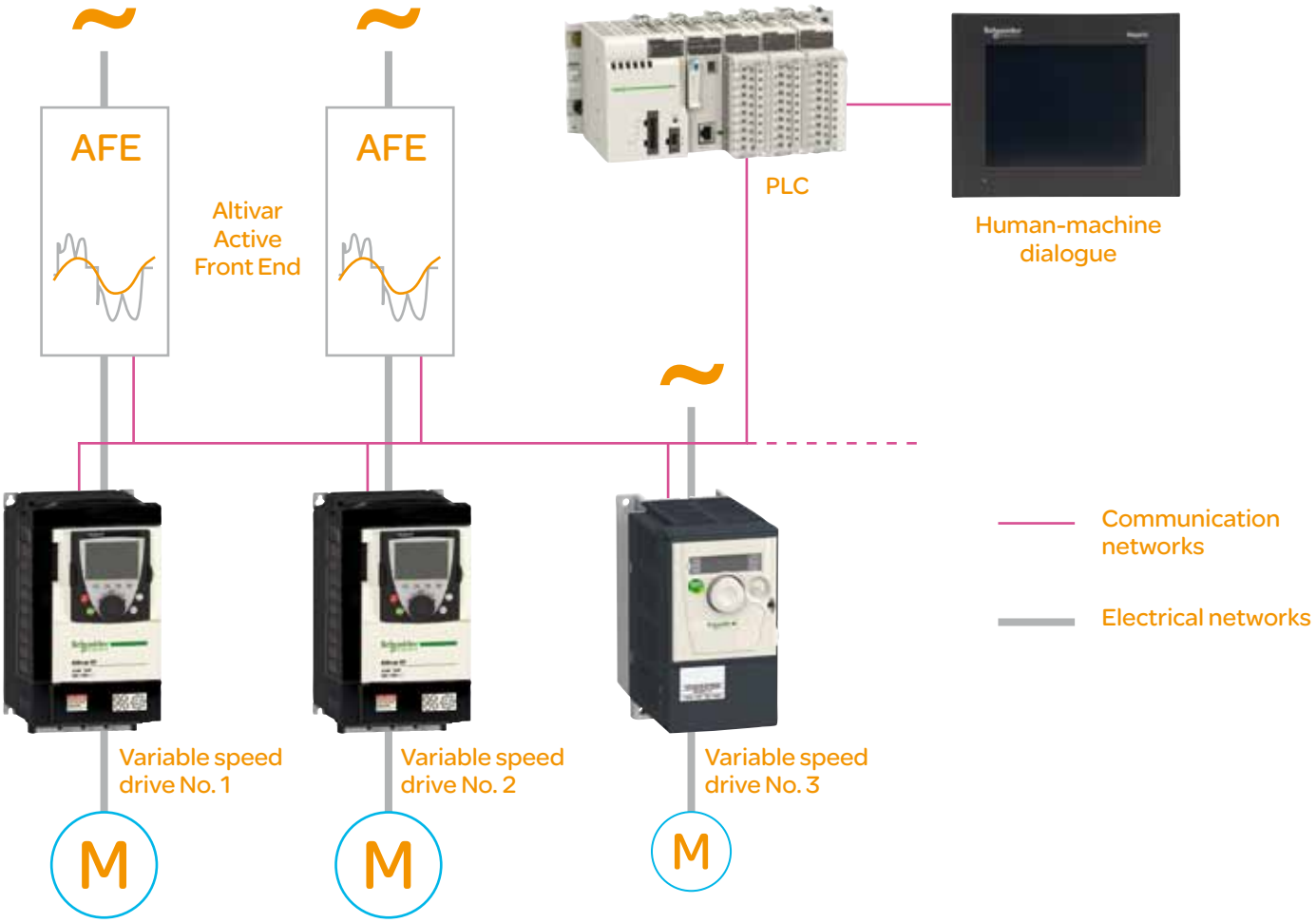
Altivar 61 Plus IP23/IP54/IP55 ready-assembled enclosure

- 90 to 2400 kW/380 to 690 V
- Compact version with IP23 and IP54 protection
- Fully closed enclosure IP55 with external water cooling
- Configurable on request
- Enclosure tested at full load

Altivar 61 Plus SA IP54 ready-assembled enclosure

- 90 to 2400 kW/380 to 690 V
- Separate air cooling system
- Unit supplied ready to connect
- Excellent resistance to harsh environments

When technology helps save energy



More user-friendly and more communicative

- Fast direct data exchanges with Modbus and CANopen as standard:
  - High-speed data exchange
  - Direct connection to industrial control systems

Improved dynamics and energy savings with Active Front End (AFE)

- Active Front End is an option which allows the drive to reduce the total current harmonic distortion (THDI) to less than 4%
- Altivar Active Front End even works with weak or unstable networks

Communication cards:

Fipio, Ethernet,Modbus Plus, PROFIBUS DP, DeviceNet, Uni-Telway, INTERBUS, LONWorks, MetasysN2, Apogee P1, BACnet, for connection to the majority of commercially-available communication networks.

Quality is our watchword, throughout the world

The international presence of a major group, with dedicated Service teams

1000
experts dedicated to consultancy and project management

150
service centres

More than
6000
experts at your service

1000
expert partners

50
customer training centres

Products compliant with international standards
- UL, cUL, CSA, CE, C-Tick, GOST
- ATEX (No. 94/9/EC zones 1, 21, 2, 22)
- Marine (DNV, ABS, BV, LRos, RMSos, KRS), Semi F47
- EMC (No. 2004/108/EC modification of directive No. 89/336/EEC
- Etc. (see catalogue)

Sustainable development
Recognised for its commitment to sustainable development, Schneider Electric has been selected to take part in the 5 main benchmark global indexes:
- Dow Jones Sustainability STOXX Index
- Dow Jones Sustainability Word Index
- ASPI Eurozone (Advanced Sustainable Performance Index)
- Ethibel Sustainability Index (ESI) Excellence Europe
- Ethibel Sustainability Index (ESI) Excellence Global

Make the most of your energy!

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