

Life Is On

**Schneider**  
Electric

# Customized drive solutions

Low-Voltage Drive Systems  
Ready-to-use from 0.75 – 1200 kW



[schneider-electric.com/drives](https://schneider-electric.com/drives)





# What will you get with Drive Systems?

Whatever you need — simple compact drives or complex drive solutions adapted to your requirements — Schneider Electric Altivar™ Drive Systems will cover all your needs.

## We listen closely.

Working with our expert drive specialists, you can refine your requirements:

- Application characteristics and necessary motor performance
- Environmental conditions and requested standards
- Integration into control systems and safety concept to save energy and reduce costs

## We provide an optimized solution.

You receive a comprehensive proposal:

- Detailed and fast quotation, including mechanical and electrical documentation
- On-site analysis by measurement and simulation
- Identification of opportunities to save energy and reduce costs

## We deliver your customized Drive Systems ready to use.

- You will receive your drive solution on schedule and manufactured according to your specifications
- Fully tested, with parameters adapted to the integrated functions
- Short lead time thanks to the modular design
- Fast and simple commissioning

# 100%

flexibility to build drives according to your needs.

# -30%

planning time thanks to modular assembly system.





# Single Drive Systems

Our Drive Systems are enclosure units with a built-in frequency inverter to control the speed of asynchronous or synchronous motors. The modular construction makes it possible to adapt the enclosure unit to your particular requirements.

# -20%

space needed compared to previous range.

### Compact design

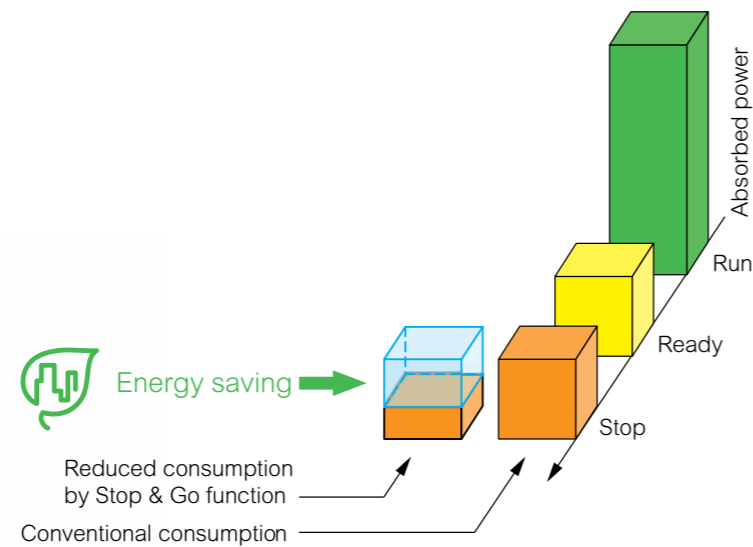
- Less space required in the control room
- Generous connecting area for power cables
- Easy access to all components
- Control panel for numerous options

### The energy-saving drive solution

- Up to 60% energy savings without additional costs
- Intelligent control of internal fans, depending on the operation
- Optimal energy efficiency over the entire life cycle
- Logging and graphic presentation of absorbed power

# 60%

energy savings at standby using innovative "Stop & Go" operation.



# World's first 3-level low harmonic drive

This new technology reaches a total harmonic distortion (THD(i)) of ~ 2%, and fulfills the requirements of the IEEE 519 standard for THD(i) < 5%, in the event of distorted mains, as well.



### Extended motor lifetime with 3-level concept

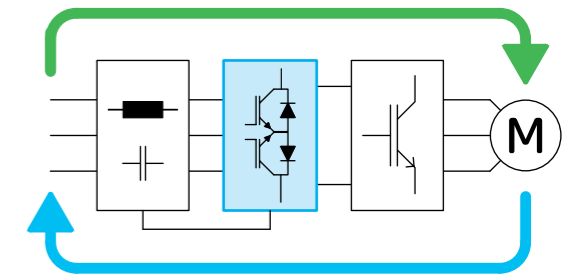
Significantly reduced voltage load in the motor compared to the classic 2-level low harmonic drives helps to extend the motor's lifetime.

### Reduced losses with 3-level concept

Compared to classic low harmonic drives, the switching frequency is increased and the current load is reduced, resulting in significantly reduced losses in the whole system.

### Compact dimensions thanks to 3-level concept

The compact dimensions of the integrated filter components offer a significant advantage. Due to the increased switching frequency, the filter dimensions can be almost halved.



3-level concept





## MultiDrive Systems

MultiDrive Systems are suitable for applications that require a common DC-bus. These are advantageous when the load of several motors leads to the simultaneous operation of both motor and generator.

### DC-bus

for efficient multimotor applications.

### 40 years

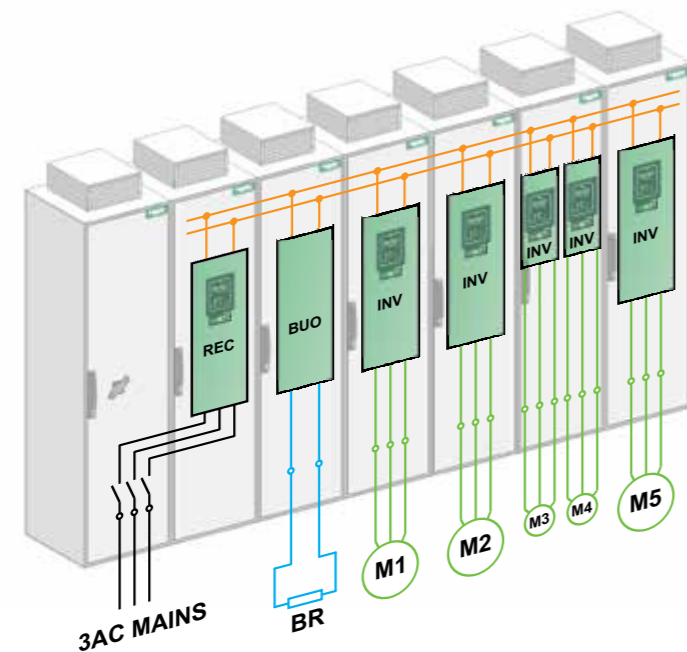
of experience in drive solutions.

#### Simple

- Simple, modular common DC-bus architecture
- Good access to all components
- Generous connection area for power cables

#### User friendly

- Uniform design for all Altivar Process Drive Systems
- Uniform features for all Altivar Process Drive Systems
- Uniform drive software for all Altivar Process Drive Systems



REC ... Rectifier Unit or Active Front End Unit  
 BUO ... Braking Unit  
 INV ... Drives from 0.75 - 1200 kW

## Drives for your process automation

It's simple to integrate Altivar Process into process automation architectures to get more out of your system.

### Simple connection

- Smart connected drives with increased user friendliness
- Dual-Ethernet and modbus onboard
- Various fieldbus modules available



### Simple integration into process architectures

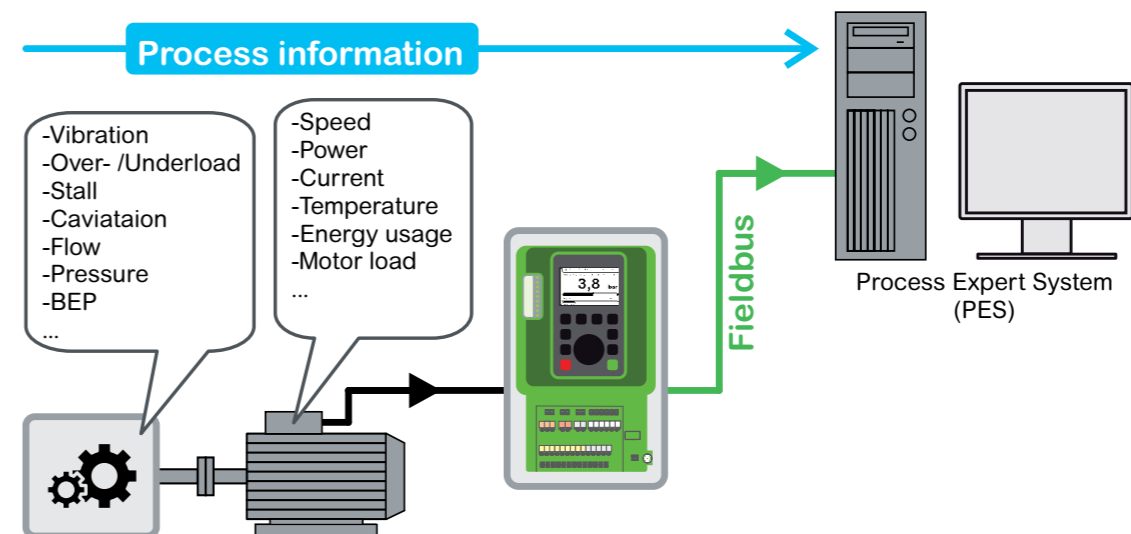
- Easy integration thanks to standardized FDT/DTM and ODVA technology
- Full compatibility with Process Expert System architectures and Modicon™ M580 controllers
- Supported by predefined Unity™ Pro libraries available on [www.schneider-electric.com](http://www.schneider-electric.com)
- Easy access via PC, tablet, or smartphone

ODVA organization: supports network technologies based on EtherNet/IP

FDT Technology: an international standard with broad acceptance in the automation industry

### Drive a sensor

Altivar Process is more than just a drive. Thanks to its embedded services, it can deliver accurate data for asset and energy management — without the need for additional sensors.







## Targeted applications

Altivar Process Drive Systems are tailor-made to meet the specific needs of your market.

### Mining, Minerals & Metals

- Highest level of protection for harsh environments
- Ambient temperature up to 55 °C
- Lower maintenance costs
- Smooth motor start reduces mechanical stress
- Low noise level

### Oil & Gas

- Low harmonic drive systems for weak power supply systems
- Safe operation, even in explosive atmospheres (ATEX)
- Low-voltage solutions for medium-voltage applications
- Solutions for installations with very long motor cables



### Energy

- Complete integration into the plant control network processes
- Wide range of fieldbus connections
- Better cost control of energy-intensive applications
- Replaces older hydraulic and mechanical controls

### Water & Wastewater

- Reduced energy consumption
- Accurate flow, pressure, and level control
- Reduced life cycle costs
- Extended equipment life
- Integrated pump curves
- Monitoring of pump efficiency



### Hoisting

- Common DC-bus structure
- Energy feedback into the power supply system
- Torque boost, even at zero speed, for safe and reliable brake control
- Extended lifetime thanks to specialized, smooth hoisting functions



### Overall features

- Access to real-time data
- QR codes to access support
- Innovative tools and diagnostics
- Powerful user interfaces
- Flexible communications
- Easy-to-maintain designs
- Full array of support services
- Built-in pump protection functions
- Multiple configurations and options



# Superior services

Our industry experts help you get the maximum return from your investments and optimize the value of your installations throughout their life cycle. Whether you need a brief telephone consultation, an on-site analysis, or the development of an entire system solution, our experts are at your disposal.



### Audits and consultancy services

- From the selection of inverters and accessories to the development of entire system solutions
- On-site analysis
- Line supply consultancy (compensation, filtering, harmonics, etc.)



### Bespoke project management

- Measurement and analysis of your site
- Target definition
- Identification of opportunities to save energy and reduce costs
- Calculation of return on investment



### Customized training

- Our experienced specialists offer training, either at our premises or at your site



### Commissioning and on-site services

- Our specialists, experienced in a wide range of industrial sectors, leverage their extensive product and application knowledge to commission your systems



### Digital services

- On-screen and issue-specific QR codes help your operators diagnose problems quickly
- Online troubleshooting with step-by-step procedures
- Track and analyze events related to your drive
- Automatic creation of technical support requests

## Overview



|                            | ATV660<br>Compact Drive Systems | ATV680<br>Low Harmonic Drive Systems | ATV960<br>High Performance Drive Systems | ATV980<br>Regenerative Drive Systems |
|----------------------------|---------------------------------|--------------------------------------|--|--------------------------------------|
| <b>Power</b>               | 90(0.75) ... 1200 kW            | 90 ... 1200 kW                       | 90(0.75) ... 1200 kW                     | 90 ... 1200 kW                       |
| <b>Voltage</b>             | 3AC 400 ... 690 V               | 3AC 400 ... 690 V                    | 3AC 400 ... 690 V                        | 3AC 400 ... 690 V                    |
| <b>Protection</b>          | IP23 or IP54, UL Type 1 or 12   | IP23 or IP54, UL Type 1 or 12        | IP23 or IP54, UL Type 1 or 12            | IP23 or IP54, UL Type 1 or 12        |
| <b>Certification</b>       | CE, EAC, RCM, ATEX, UL          | CE, EAC, RCM, ATEX, UL               | CE, EAC, RCM, ATEX, UL                   | CE, EAC, RCM, ATEX, UL               |
| <b>Harmonic Mitigation</b> | 32 ... 48 % THD(i)              | ~2 % THD(i) with 3-level technology  | 32 ... 48 % THD(i)                       | ~2 % THD(i) with 3-level technology  |
| <b>Motor Control</b>       | Open loop                       | Open loop                            | Open loop/Closed loop                    | Open loop/Closed loop                |
| <b>Braking Unit</b>        | —                               | —                                    | Compatible                               | Compatible                           |
| <b>Energy Feedback</b>     | —                               | —                                    | —  | 4-quadrant operation                 |



### ATV990 MultiDrive Systems

|                      |                      |                       |   |
|----------------------|----------------------|-----------------------|---|
| <b>Power</b>         | 90(0.75) ... 1200 kW | <b>Design</b>         | Based on common DC-bus                  |
| <b>Voltage</b>       | 3AC 400 ... 690 V    | <b>Supply Units</b>   | Rectifier Unit or Active Front End Unit |
| <b>Protection</b>    | IP23 or IP54         | <b>Inverter Units</b> | Drives from 0.75 ... 1200 kW            |
| <b>Certification</b> | CE, EAC, RCM, ATEX   | <b>Braking Unit</b>   | Compatible                              |



## How to order

Contact your local Schneider Electric™ drives expert.

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