Altivar AC Drives
Advanced energy management and performance in motor control

schneider-electric.us/drives
Schneider Electric

Segment focused. Customer centric.
Schneider Electric can help you meet the challenges of the trends impacting our world. With a long history of industry-leading motor control solutions and a global footprint, we offer the right choices for motor controls from simple local applications to large global enterprise solutions.

5 Key trends shaping our world

1. Urbanization
   Greater demand for water and wastewater solutions

2. Industrialization
   Greater need for connectivity and automation

3. Digitization
   Big data capability provides new avenues for efficiencies

4. Scarcity of resources
   Demand for efficient use of resources

5. Climate change
   Demand for sustainable development

The Altivar™ Drives family: The most advanced and user-friendly variable-speed AC Drives and Drive Systems offering on the market.

Featuring proprietary motor control algorithms to achieve optimal motor performance and complete scalability to match your application speed, size, and protection requirements, the complete line of Altivar products and solutions delivers the flexibility and performance to:

- Optimize a broad range of utility and industrial applications including pumps, fans, compressors, material handling, hoisting, packaging, and material working.
- Reduce your energy costs by using proprietary energy-saving technologies available only from Schneider Electric.
- Improve your uptime by simplifying installation, commissioning, and maintenance by providing advanced diagnostics, industry-leading voltage ride-through capability, and seismic-qualified products and solutions.

<table>
<thead>
<tr>
<th>INNOVATIVE</th>
<th>SUPPORTIVE</th>
<th>EXPERIENCED</th>
</tr>
</thead>
<tbody>
<tr>
<td>359 active patents</td>
<td>1,000+ drives application specialists annually</td>
<td>1.5M drives sold annually</td>
</tr>
</tbody>
</table>

359 active patents
1,000+ drives application specialists annually
1.5M drives sold annually
Improve your business operations with Altivar AC Drives

Schneider Electric offers a portfolio of AC Drives designed to provide value in your business operations.

For more than 30 years, Schneider Electric has supplied AC Drives to energy-intensive industries across the world. We are a global-leading supplier of reliable, high-performance AC Drives, built for a wide range of applications across diverse and demanding segments.
Altivar AC Drives for machines

Designed to assist OEMs, panel builders, and system integrators build tailored, high-performance equipment.

- Material handling
- Material working equipment
- Material forming and embossing
- Gappers, palletizing
- Packaging machinery
- Metal process machinery
- Hoisting
- Extruding
- PM motor control

<table>
<thead>
<tr>
<th></th>
<th>Altivar 12</th>
<th>Altivar 320 Compact</th>
<th>Altivar 320 Book</th>
<th>Altivar 340</th>
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</thead>
<tbody>
<tr>
<td><strong>Voltage</strong></td>
<td>115 208/230</td>
<td>208/230 480 600</td>
<td>208/230 480</td>
<td>480</td>
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<tr>
<td><strong>HP</strong></td>
<td>0.25 – 1 0.25 – 5</td>
<td>0.25 – 20 0.5 – 5 1 – 20</td>
<td>0.25 – 20 0.5 – 20</td>
<td>1 – 100</td>
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<tr>
<td><strong>kW</strong></td>
<td>0.18 – 0.75 kW 0.18 – 4 kW</td>
<td>0.18 – 15 kW 0.37 – 4 kW 0.75 – 15 kW</td>
<td>0.18 – 15 kW 0.37 – 15 kW</td>
<td>0.75 – 75 kW</td>
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<tr>
<td><strong>Enclosure</strong></td>
<td>IP20</td>
<td>IP20, UL Type 1 w/ Conduit Kit</td>
<td>IP20</td>
<td>IP20</td>
</tr>
<tr>
<td><strong>Performance</strong></td>
<td>Simple Machines</td>
<td>Simple &amp; Advanced Machines</td>
<td>Simple &amp; Advanced Machines</td>
<td>High-Performance Machines</td>
</tr>
</tbody>
</table>

Altivar AC Drives for buildings

Providing economical choices for OEMs and energy-management capabilities for building managers.

- Ventilation fans
- Air conditioning fans
- Recovery wheel control
- Heating and cooling pumps
- Cooling tower pumps and fans
- Building water pressure pumps

<table>
<thead>
<tr>
<th></th>
<th>Altivar 212*</th>
<th>S-Flex*</th>
<th>ATV660</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Voltage</strong></td>
<td>208/230 480</td>
<td>208/230 480</td>
<td>208/230 480</td>
</tr>
<tr>
<td><strong>HP</strong></td>
<td>1 – 40 1 – 100</td>
<td>1 – 40 1 – 100</td>
<td>1 – 900</td>
</tr>
<tr>
<td><strong>kW</strong></td>
<td>0.75 – 30 kW 0.75 – 75 kW</td>
<td>0.75 – 700 kW</td>
<td>0.75 – 700 kW</td>
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<tr>
<td><strong>Enclosure</strong></td>
<td>IP 20, UL Type 1 with kit, UL Type 12</td>
<td>UL Type 1, 12, 3R</td>
<td>UL Type 1,12, 3R (1 – 125hp)</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td>Built in: modbus, N2 Bacnet™ &amp; P1, Lonworks option</td>
<td>Built in: modbus, N2Bacnet &amp; P1, Lonworks option</td>
<td>Built in: Ethernet</td>
</tr>
</tbody>
</table>

* AHRI Certified Products
Altivar Process Drives for industrial utility applications

Altivar process drives deliver added-value services to enable business and process optimization through improved life cycle asset management and optimized energy consumption. Designed to assist OEMs, system integrators, and industrial process owners, Altivar process drives improve process performance by enabling full information and operational technology convergence.

Embedded EcoStruxure Plant™ and Foxboro™ Evo architectures simplify system integration.

### Water applications
- Booster pumps
- Lift station pumps
- Desalination pumps
- Water supply pumps
- Water suction pumps
- Progressing cavity pumps
- Influent and effluent pumps
- Secondary clean water pumps

### Oil & Gas applications
- Rod pumps
- Feed pumps
- Pipeline, booster, and unloading pumps
- Water injection pumps
- Reciprocating and centrifugal compressors
- Progressing cavity pumps
- Electric submersible pumps

### Mining & Metals applications
- Hoisting
- Crushers
- Extruding
- Conveyors
- Slurry pumps
- Induced draft fans
- Quenching pumps
- Dust collection fans
- Mine ventilation fans
- Hydro-transport pumps

### Specifications Table

<table>
<thead>
<tr>
<th></th>
<th>Altivar 630</th>
<th>Altivar 650</th>
<th>Altivar 930</th>
<th>Altivar 950</th>
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<tbody>
<tr>
<td><strong>Voltage</strong></td>
<td>208/230</td>
<td>480</td>
<td>208/230</td>
<td>480</td>
</tr>
<tr>
<td><strong>HP</strong></td>
<td>1 – 125</td>
<td>1 – 125</td>
<td>1 – 125</td>
<td>1 – 125</td>
</tr>
<tr>
<td><strong>kW</strong></td>
<td>0.75 – 90 kW</td>
<td>0.75 – 90 kW</td>
<td>0.75 – 90 kW</td>
<td>0.75 – 90 kW</td>
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<tr>
<td><strong>Enclosure</strong></td>
<td>UL Type 1, Heatsink kit option: 125 – 250 hp</td>
<td>UL Type 12</td>
<td>UL Type 1, Heatsink kit option: 125 – 250 hp</td>
<td>UL Type 12</td>
</tr>
<tr>
<td><strong>Application functions</strong></td>
<td>Multi-pump control, &gt; 30 pump functions, fans, and simple material handling</td>
<td>Multi-pump control, &gt; 30 pump functions, fans, and simple material handling</td>
<td>Load share, master slave, safety inputs, dynamic braking</td>
<td>High-torque capacity encoder options, dual Ethercat ports</td>
</tr>
<tr>
<td><strong>Performance</strong></td>
<td>Normal or heavy duty</td>
<td>Normal or heavy duty</td>
<td>High-torque capacity encoder options, dual Ethercat ports</td>
<td>High-torque capacity encoder options, dual Ethercat ports</td>
</tr>
</tbody>
</table>
Altivar Drive Systems for industrial process utility

Schneider Electric configurable packages and systems that deliver high performance across multiple segments.

Water
It is estimated that 15% of worldwide water use is industrial. All industries rely on the unlimited availability of water required for processes that control flow and pressure through large pumps.

Power
Market pressure and rising costs require producers to convert a larger share of fuel into sustainable kilowatt hours. Operating optimization is key to cost-effective production.

Oil & Gas
Complex operations and harsh environments put high demand on most chemical and oil and gas process equipment. Achieving high efficiency and availability is critical to increased output and improved product quality.

Mining, Minerals & Metals
Sustainable growth is a major challenge as demand exceeds supply and new deposits are in increasingly remote regions. Processes need to improve efficiency and safety while reducing environmental impact.

Benefits

- Energy savings
- Increased process efficiency
- Helps keep costs under control
- Better cost-control of energy intensive applications

- Improved process reliability
- Reduce emissions
- Lower maintenance costs
- Improved heat rate
- Simple and effective process control
- Efficient heat rate

- Accurate flow and pressure control
- Improved heat rate
- Higher plant availability
- Simple and effective process control
- Efficient control of large fans and pumps

- Soft starting & stopping
- Improved process control
- Operate equipment at optimum set point
- Replace older hydraulic and mechanical controls

Features

- Access to real-time data
- Powerful user interfaces
- Full array of support services

- QR codes to access support
- Flexible communications
- Built-in pump protection functions

- Innovative tools and diagnostics
- Easy-to-maintain designs
- Multiple configurations and options

Life is On
Altivar Drive Systems for industrial process and utility

AC drive platform packages configured, optimized, and engineered to order for your business.

- Water applications
  - Influent and effluent pumps
  - Booster pumps
  - Secondary clean water pumps
  - Desalination pumps
  - High-service pumps
  - Water supply pumps
  - Water suction pumps

- Oil & Gas applications
  - Rod pumps
  - Feed pumps
  - Electric submersible pumps
  - Pipeline, booster, and unloading pumps
  - Reciprocating and centrifugal compressors
  - Water injection pumps
  - Progressing cavity pumps

- Mining & Metals
  - Conveyors
  - Furnace fans
  - Slurry pumps
  - Induced draft fans
  - Quenching pumps
  - Dust collection fans
  - Mine ventilation fans
  - Hydro-transport pumps

- Power Generation applications
  - Dust collection fans
  - Induced and forced-draft boiler fans
  - Feed water, cooling, circulation, and condensate pumps
  - Reactor recirculation pumps

<table>
<thead>
<tr>
<th>Altivar Outdoor Drive System</th>
<th>Altivar 660 Compact Drive System</th>
<th>Altivar 960 Compact Drive System</th>
<th>Altivar 680 Low Harmonic Drive System</th>
<th>Altivar 980 Low Harmonic Regenerative Drive System</th>
<th>Altivar 1260 Medium Voltage Drive System</th>
<th>Altivar 1260C Compact Medium Voltage Drive System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>460</td>
<td>230/460</td>
<td>230/460</td>
<td>460</td>
<td>460</td>
<td>4,160</td>
</tr>
<tr>
<td>HP</td>
<td>460 V (VT) 20 – 350 hp 460 V (CT) 20 – 250 hp</td>
<td>1 – 900HP (ND) 1 – 700HP (HD)</td>
<td>1 – 900HP (ND) 1 – 700HP (HD)</td>
<td>150HP – 900HP (ND) 125HP – 700HP (HD)</td>
<td>150HP – 900HP (ND) 125HP – 700HP (HD)</td>
<td>700 – 6,500</td>
</tr>
<tr>
<td>Enclosure</td>
<td>NEMA 3R</td>
<td>UL Type 1, 12 3R (1 – 125 hp 460V)</td>
<td>UL Type 1, 12 3R (1 – 125 hp 460V)</td>
<td>UL Type 1, 12</td>
<td>UL Type 1</td>
<td>UL Type 1</td>
</tr>
<tr>
<td>Performance</td>
<td>Normal Duty or Heavy Duty</td>
<td>Normal Duty or Heavy Duty</td>
<td>Normal Duty or Heavy Duty</td>
<td>Low harmonic drive system with active mains rectifier to reduce current harmonics THDi &lt; 5% Stable performance with</td>
<td>Low harmonic drive system with active mains rectifier to reduce current harmonics THDi &lt; 5% Stable performance with</td>
<td>Synchronous or induction</td>
</tr>
<tr>
<td>Features</td>
<td>Outdoor rating to withstand blowing dust, driving rain, and heat</td>
<td>Modular concept with functionality of the Altivar Process 630</td>
<td>Modular concept with functionality of the Altivar Process 930</td>
<td>System approach to managing harmonics. ATV660 is the low harmonic solution for pumping and general purpose applications.</td>
<td>System approach to managing harmonics. ATV980 is design for low harmonic and regenerative applications.</td>
<td>3-Level NPC, 24 pulse DFE, sine wave filter, HMI, Web App, UPS, PLC, MC-IGBTs, integral fused switch and compact form factor</td>
</tr>
</tbody>
</table>

Life is On | Schneider Electric
Solutions for every stage of your equipment’s life cycle

At Schneider Electric, we take a long-term, holistic approach to determine your facility and operational needs, then develop strategies to improve the performance of your people, systems, and processes.

Our expertise enables you to cut costs, reduce energy consumption, and keep your systems up and running through routine maintenance, process enhancements, and migrations to new, state-of-the-art functionality.

Start-up and commissioning
• Expert installation support service, comprehensive power-up, and diagnostic check on system components

Technical training
• Training offered on-site, off-site, and online for Schneider Electric drives products taught by professional instructors

Remote technical support
• Comprehensive online and phone support from experts trained on Schneider Electric drives products

On-site technical support
• Regular maintenance, upgrades, and conversion assistance, small application/programming assistance, troubleshooting, and repair — even in emergencies

Preventive maintenance
• Programs to proactively detect potential system issues to help avoid costly unscheduled downtime and reduced equipment life

Industrial repair services
• Repair capabilities for more than 400,000 part numbers from more than 2,500 manufacturers at our Greensboro, NC facility

Spare parts management
• On-site assessment to determine parts/inventory needs to ensure proper system operation and reduce downtime/costs

Migration and modernization
• Process optimization through the identification/replacement of legacy products for new, innovative technology while maximizing existing hardware for cost-effective solutions

Software renewals
• Access to the latest software available to ensure optional functionality for your system

Extended warranty
• Protection plans tailored to your needs to reduce costs and out-of-service time

When it comes to your process equipment, we can help at each point
• Personalized assessment, system design, and consulting
• Expert installation and new system start-up assistance
• Regular maintenance, repair, support, and troubleshooting
• Cost-effective modernization of legacy equipment
• Timely upgrades and conversion assistance to new equipment

More information
For more detailed information, including product specifications, please visit altivardrives.com.