

Pre-sales FAQs

ATV12

1. What types of machines are compatible with the Altivar 12?

The Altivar 12 is designed to control three-phase asynchronous motors up to 4 kW in both industrial and commercial environments. It is particularly well-suited for **simple machines**, such as:

- **Material handling:** conveyors, automatic gates, rotating billboards
- **Wellness and fitness equipment:** treadmills, medical beds, jacuzzis
- **Food processing:** mixers, slicers, planetary mixers
- **Woodworking and textile machines:** saws, lathes, knitting machines
- **Pumping and ventilation:** centrifugal pumps, exhaust fans, boilers

Its wide compatibility is enhanced by built-in features like **PID control**, **underride detection**, and **ramp switching**, making it suitable for a broad range of applications.

2. Is the ATV12 compatible with Schneider Electric PLCs and HMIs?

Yes, the ATV12 integrates seamlessly with Schneider Electric systems:

- **PLCs:** such as Twido and M340, via logic inputs or Modbus communication
- **HMIs:** like Magelis, using the built-in RJ45 Modbus port
- **Accessories:** compatible with Schneider tools like the Simple Loader, Multi Loader, and SoMove software

This ensures smooth integration into compact and efficient automation architectures.

3. What communication options are available for the ATV12?

The ATV12 offers several communication options:

- **Modbus RTU** over RS485 (built-in RJ45 port)
- **SoMove software** for PC configuration (via serial or Bluetooth connection)
- **LED remote keypad** for local access
- **Simple Loader / Multi Loader** for fast configuration duplication

These tools provide flexible setup and maintenance, whether locally or remotely.

4. What protections are built into the ATV12 to secure the installation?

The ATV12 includes multiple protection features to ensure safe operation:

- **Thermal protection** for the motor (I^2t)
- **Overload and underload detection**
- **Automatic restart** after fault clearance
- **DC injection braking** for fast stops
- **Catch on the fly** for smooth restarts after power loss

These features ensure reliable operation even in demanding or unstable environments.

5. How do I choose the right ATV12 for my application?

To select the correct ATV12 model, consider the following:

1. **Motor power:** from 0.18 to 4 kW
2. **Power supply type:**
 - 100–120 V single-phase → F1 models
 - 200–240 V single-phase → M2 models
 - 200–240 V three-phase → M3 models
3. **Mounting type:**
 - **Heat sink:** with integrated cooling
 - **Base plate:** for direct mounting or liquid cooling
4. **Environment:**
 - Residential or noise-sensitive → C1 EMC filter included
 - Industrial → robust design and advanced communication options

ATV320

1. What types of machines are compatible with the Altivar 320?

The Altivar 320 is designed for both simple and complex machine applications, offering reliable control for **asynchronous** and **synchronous** motors from **0.18 to 15 kW**. It is ideal for:

- **Material handling:** conveyors, hoists, automated storage systems
- **Packaging and processing:** bagging, labeling, food & beverage machinery
- **Textile and material working:** cutting, shaping, spinning
- **Pumps, fans, and mixers:** with energy-efficient motor control algorithms

Its **robust design, flexible mounting options, and integrated safety features** make it suitable for harsh industrial environments and smart machine architectures.

2. Is the ATV320 compatible with Schneider Electric PLCs and HMIs?

Yes. The ATV320 is fully integrated into Schneider Electric's **MachineStruxure™** automation platform and supports:

- **Embedded protocols:** Modbus RTU and CANopen
- **Optional communication cards:** Modbus TCP, Ethernet/IP, Profinet, EtherCAT, Powerlink, Profibus DP, DeviceNet
- **SoMove software:** for configuration, diagnostics, and safety setup (via USB, Bluetooth, or Ethernet)
- **PLCopen-compliant function blocks:** for seamless integration with Schneider PLCs such as **Modicon M221, M241, and M251**

This ensures **fast commissioning, real-time diagnostics, and easy integration** across automation layers.

3. What communication options are available for the ATV320?

The ATV320 offers a wide range of connectivity options to fit various automation architectures:

- **Embedded:** Modbus RTU, CANopen
- **Optional communication cards:**
 - **Ethernet-based:** Modbus TCP, Ethernet/IP, Profinet, EtherCAT, Powerlink
 - **Serial-based:** Profibus DP, DeviceNet
 - **CANopen daisy chain:** for multi-drive topologies
- **I/O-based control:** for standalone or basic applications

- **Web server:** available via optional Ethernet cards, for remote diagnostics and monitoring

This flexibility allows integration into both legacy and modern industrial networks.

4. What protections are built into the ATV320 to secure the installation?

The ATV320 includes **integrated safety functions** compliant with the **Machinery Directive 2006/42/EC** and **IEC 61800-5-2** standards:

- **STO (Safe Torque Off)** – SIL3 / PL e (standard on all models)
- **SS1 (Safe Stop 1), SLS (Safe Limited Speed), SMS (Safe Maximum Speed)** – SIL2 / PL d (available on selected models or via optional safety modules)
- **GDL (Guard Door Lock)** – typically implemented externally, not embedded in the drive

The drive also features a **rugged design** with **3C3/3S2 conformal coating**, allowing operation in environments up to **60°C** without external cooling (with derating if needed).

5. How do I choose the right ATV320 for my application?

To select the appropriate ATV320 model, consider the following criteria:

1. **Motor type:** asynchronous or synchronous
2. **Power rating:** from 0.18 to 15 kW
3. **Voltage class:**
 - 200–240 V single-phase → M2
 - 200–240 V three-phase → M3
 - 380–500 V three-phase → N4
 - 525–600 V three-phase → S6
4. **Form factor:**
 - **Book:** for side-by-side mounting in narrow enclosures
 - **Compact:** for shallow cabinets or direct machine integration
5. **Environmental conditions:**
 - For harsh environments, choose models with **3C3/3S2 coating**
 - For dusty or washdown areas, consider **IP65/IP66** versions
6. **Communication needs:**
 - Select models with appropriate **embedded protocols** or **optional fieldbus cards** based on your network architecture

ATV600

1. What types of applications are compatible with the Altivar Process ATV600?

The ATV600 is designed for fluid and HVAC process applications in industrial and utility environments. It supports:

- Pumps (clean water, wastewater, irrigation, chemical dosing)
- Fans (cooling towers, ventilation, air handling units)
- Compressors (air, gas)
- Blowers, centrifuges, and mixers
- Energy-intensive infrastructure (district heating, desalination, oil & gas)

It supports asynchronous, synchronous, and special motors from 0.75 kW to 800 kW (up to 1.5 MW in some variants), making it ideal for demanding process control.

2. Is the ATV600 compatible with Schneider Electric automation systems?

Yes. The ATV600 is fully integrated into EcoStruxure™ Plant and Process architectures. It supports:

- Embedded protocols: Modbus TCP, Ethernet/IP, CANopen, Modbus RTU
- Optional communication modules: Profibus DP, Profinet, EtherCAT, BACnet/IP, DeviceNet
- Integration with PLCs: Modicon M340, M580, and SCADA systems
- SoMove and EcoStruxure Control Expert: for configuration, diagnostics, and commissioning

This ensures seamless integration into both new and existing automation infrastructures.

3. What communication options are available for the ATV600?

The ATV600 offers advanced connectivity:

- Standard embedded:
- Ethernet (Modbus TCP, Ethernet/IP)
- Serial (Modbus RTU, CANopen)
- Optional modules:
- Profibus DP, Profinet, EtherCAT, BACnet/IP, DeviceNet
- Web server: for remote diagnostics and monitoring
- Bluetooth and USB: for local configuration via SoMove

This makes it highly adaptable to modern industrial networks and IoT-ready environments.

4. What protections and services are built into the ATV600?

The ATV600 includes embedded services and protection features designed for process reliability:

- Embedded energy monitoring and asset management
- Motor and drive protection: thermal, overload, short-circuit, phase loss
- Conformal coating (3C3/3S2) for harsh environments
- Safe Torque Off (STO) as standard
- Optional safety modules for extended safety functions (SIL2/SIL3)

It also supports predictive maintenance and condition monitoring, reducing downtime and improving operational efficiency.

5. How do I choose the right ATV600 for my application?

To select the correct ATV600 model, consider:

Motor type: asynchronous, synchronous, or special

Power rating: from 0.75 kW to 800 kW (up to 1.5 MW in some cases)

Voltage class:

- 380–480 V
- 500–690 V

Application type: pump, fan, compressor, etc.

Environment:

- Harsh or corrosive → choose models with 3C3/3S2 coating
- High IP protection available for outdoor or washdown areas

Control needs:

- Basic speed control or advanced process control
- Safety requirements (STO, SS1, etc.)
- Communication protocols for integration

 Schneider Electric provides a Product Selector and SoMove software to help configure and size the right drive.

ATV900

1. What types of applications are compatible with the Altivar Process ATV900?

The ATV900 is designed for **demanding industrial process applications** requiring high performance, precision, and connectivity. It supports:

- **Pumps and fans** in water, wastewater, HVAC, and energy
- **Compressors and blowers** in oil & gas, mining, and chemicals
- **Centrifuges, mixers, and extruders** in food & beverage, pharma, and heavy industry
- **Master/slave configurations** for multi-motor systems

It supports **asynchronous and synchronous motors** from **0.75 kW to 800 kW**, with advanced control for torque, speed, and energy optimization.

2. Is the ATV900 compatible with Schneider Electric automation systems?

Yes. The ATV900 is fully integrated into **EcoStruxure™ Plant and Process** and supports:

- **Embedded protocols:** Modbus TCP, Ethernet/IP, CANopen, Modbus RTU
- **Optional modules:** Profibus DP, Profinet, EtherCAT, DeviceNet, CANopen
- **Integration with PLCs:** Modicon M340, M580, and SCADA systems
- **SoMove and EcoStruxure Control Expert:** for configuration, diagnostics, and safety setup

It also includes a **web server** and **data logging** for remote diagnostics and maintenance.

3. What communication options are available for the ATV900?

The ATV900 offers **extensive connectivity**:

- **Standard embedded:**
 - Ethernet: Modbus TCP, Ethernet/IP
 - Serial: Modbus RTU, CANopen
- **Optional communication cards:**
 - Profibus DP, Profinet, EtherCAT, DeviceNet, CANopen daisy chain
 - **Web server:** for real-time monitoring and diagnostics
 - **USB and Bluetooth:** for local configuration via SoMove

This makes it ideal for integration into modern industrial networks and IIoT environments.

4. What protections and services are built into the ATV900?

The ATV900 includes a wide range of **embedded services** and **protection features**:

- **Safe Torque Off (STO)** as standard
- **Optional safety functions:** SS1, SLS, SMS, GDL (SIL2/SIL3 compliant)
- **Energy dashboard and process monitoring**
- **Asset and drift monitoring**
- **Stop & Go function** to reduce energy consumption
- **Conformal coating (3C3/3S2)** for harsh environments
- **Integrated EMC filter** and IP21/IP54 options

These features ensure high availability, safety, and energy efficiency.

5. How do I choose the right ATV900 for my application?

To select the correct ATV900 model, consider:

1. **Motor type:** asynchronous or synchronous
2. **Power rating:** from 0.75 kW to 800 kW
3. **Voltage class:**
 - 380–480 V
 - 500–690 V
4. **Application type:** pump, fan, compressor, extruder, etc.
5. **Environment:**
 - Harsh or corrosive → choose models with 3C3/3S2 coating
 - IP21 or IP54 depending on installation
6. **Control and safety needs:**
 - Basic STO or extended safety functions
 - Communication protocols for integration
 - Master/slave or multi-motor control

ATS430

1. What types of applications are compatible with the ATS430?

The ATS430 is designed for **standard industrial machines** using **asynchronous motors**. It is ideal for :

- **Pumps** (water, wastewater, irrigation)
- **Fans and blowers**
- **Compressors**
- **Conveyors**
- **Mixers and agitators**

It supports motors from **4 to 400 kW**, with supply voltages from **208 to 600 V AC**, and is optimized for smooth starting and stopping of motors while reducing mechanical stress and energy consumption

2. Is the ATS430 compatible with Schneider Electric automation systems?

Yes. The ATS430 integrates easily into Schneider Electric's **EcoStruxure™** architecture and supports:

- **Modbus RTU** communication (embedded)
- **Optional remote HMI** (plain text or graphical display)
- **Condition monitoring and system diagnostics**
- **Cybersecurity best practices** for secure integration

It can be used alongside Schneider PLCs, HMIs, and SCADA systems for full process control.

3. What communication and monitoring features are available?

The ATS430 includes:

- **Embedded Modbus RTU** for integration into automation networks
- **Advanced monitoring** of motor, application, power, and energy
- **Accuracy >95%** for energy and performance data
- **Optional remote display** (IP65/IP43) for door mounting
- **Event and fault logging** for diagnostics and maintenance

These features help reduce downtime and improve operational visibility.

4. What protections and services are built into the ATS430?

The ATS430 includes:

- **Torque control** for smooth acceleration and deceleration
- **Thermal and overload protection**
- **Phase loss and imbalance detection**
- **High resistance to electrical and mechanical stress**
- **Efficiency rating of 99.5%**
- **Conformal coating (3C3/3S2)** for harsh environments
- **Eco-designed** with recycled and bio-based materials

It complies with **IEC/EN 60947-4-2** and is certified CE, cULus, UKCA, RCM, and CCC

5. How do I choose the right ATS430 for my application?

To select the correct ATS430 model, consider:

1. **Motor power:** from 4 to 400 kW
2. **Supply voltage:** 208–600 V AC
3. **Control voltage:** 110–230 V AC
4. **Application type:** pump, fan, compressor, etc.
5. **Environment:**
 - Harsh or dusty → choose models with 3C3/3S2 coating
 - Optional IP65/IP43 remote display for panel integration
6. **Monitoring needs:** energy, torque, and fault diagnostics

ATS490

1. What types of applications are compatible with the ATS490?

The ATS490 is designed for **demanding industrial and infrastructure applications** using **asynchronous motors**. It is ideal for:

- **Pumps** (clean water, wastewater, irrigation)
- **Fans and blowers**
- **Compressors**
- **Conveyors, mixers, crushers, grinders**
- **Cutters and agitators**

It supports motors from **4 to 900 kW**, with supply voltages from **208 to 690 V AC**, and is optimized for smooth motor starting and stopping, reducing mechanical stress and energy use

2. Is the ATS490 compatible with Schneider Electric automation systems?

Yes. The ATS490 is fully integrated into **EcoStruxure™** and supports:

- **Native Ethernet** (Modbus TCP, EtherNet/IP)
- **Modbus RTU** (serial)
- **Optional communication modules** for extended protocols
- **Remote HMI** (IP65) for door mounting
- **Condition monitoring and cybersecurity features**

It works seamlessly with Schneider PLCs, HMIs, and SCADA systems, enabling advanced motor and energy management.

3. What communication and monitoring features are available?

The ATS490 includes:

- **Native Ethernet port** (Modbus TCP, EtherNet/IP)
- **Modbus RTU serial link**
- **Integrated condition monitoring** for motor, application, power, and energy
- **Data accuracy >95%**
- **Event and fault logging**
- **Optional IP65 remote display** for panel integration

These features support predictive maintenance and reduce downtime.

4. What protections and services are built into the ATS490?

The ATS490 includes:

- **Safe Torque Off (STO)** – certified
- **Torque control** for smooth acceleration/deceleration
- **Thermal, overload, phase loss, and imbalance protection**
- **Efficiency of 99.5%**
- **Conformal coating (3C3/3S2)** for harsh environments
- **Cybersecurity certification**
- **Eco-designed** with recycled and bio-based materials

It complies with **IEC/EN 60947-4-2** and is certified CE, cULus, UKCA, RCM, CCC, and DNV

5. How do I choose the right ATS490 for my application?

To select the correct ATS490 model, consider:

1. **Motor power:** from 4 to 900 kW
2. **Supply voltage:** 208–690 V AC
3. **Control voltage:** 110–230 V AC
4. **Application type:** pump, fan, compressor, etc.
5. **Environment:**
 - Harsh or dusty → choose models with 3C3/3S2 coating
 - Optional IP65 remote display for panel integration
6. **Monitoring and safety needs:**
 - Energy, torque, and fault diagnostics
 - STO and condition monitoring