



Altivar Process variable speed drives

Your process deserves more than just a drive



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Life Is On

Schneider
Electric

More than just a drive

Altivar™ Process variable speed drives deliver top performance that exceeds expectations. They optimize business performance across both utility and industrial processes (0.75 kW – 1.5 MW) in a number of demanding segments.

By increasing efficiency and reliability in the industrial setting, you can pass the benefits on to your customers and beyond.

How to navigate this document

- Use bookmarks, available on Acrobat® Reader®
- Scroll / swipe down
- Click / tap, marked with links or



Watch a video



Learn more



Say hello to the first services-oriented drives on the market

As the world's first services-oriented drives, the Altivar Process range gives you a solution to address your challenges. Altivar Process drives provide business optimization by managing increased data volumes, improving services, and boosting overall efficiency. These capabilities mean:

- **Real-time intelligence** – access to energy use and process information anywhere, anytime
- **User friendliness** – simplifying work in harsh environments, performing upgrades, retrofits, or new installations
- **Green Premium product** – energy savings of up to 25%, using green and ethical materials and enabling increased recyclability, fully compliant with RoHS-2 and REACH
- **Tailored engineering** – seamless integration into plant structures dedicated to specific processes
- **Smart services** – for a stronger ROI and optimal value of your installations



Improve performance without making additional investments

Altivar Process drives not only boost efficiency but also improve safety and reliability at your site. In other words, they are able to secure what other drives cannot.

Up to
20%
downtime reduction*

Additional
8%
savings
(compared with
a standard drive)*

Up to
50%
energy savings
(compared with direct
line motor starters)*

* Based on previous data. Not a guarantee of future performance or performance in your particular circumstances



Achieve process operational efficiency

Altivar Process variable speed drives are designed to increase application performance for utility and industrial processes.

They help you maximize efficiency and realize business optimization by:

- Operating close to the best efficiency point (BEP), thanks to its embedded capability to deliver advanced system management
- Presenting complex production insights in a simple and intuitive way
- Providing unmatched visibility and control of your entire process with minimum energy usage



Pump curves embedded

- Easy-to-set 5-point curve, downloadable in open CSV standard format



Pump monitoring

- Graphic visualization
- Direct view of operation point
- Pump efficiency assessment

Achieve sustainable energy efficiency without extra costs

Energy management success relies on the ability to access a single system of records that permits timely analysis and reporting. Altivar Process drives embed an accurate power measurement feature (error rate below 5%) and provide information on consumed energy compared to production.

In addition, they detect power drifts and inform you in real time via a customizable alarm management system.

The advanced design of an Altivar Process drive delivers power quality that can help you avoid penalties. With a 48% THDi at motor loads from 80 to 100%, you get a solution with nearly zero harmonics, compliant with IEEE519 (which means a power loss of minus 14%*).

*compared with standard Active Front End solutions.



Minimize your total cost of ownership

Through system and equipment condition monitoring, Altivar Process drives allow you to anticipate system failures and take the necessary steps to avoid them in real time. With this predictive maintenance approach you can:

- Enhance production line reliability and efficiency
- Extend equipment life cycle
- Provide safer working conditions on site
- Reduce labor costs

Moreover, digital capabilities and best-in-class mechanical characteristics allow you to:

- Support your operators through a dynamic QR code that makes it easy to solve issues and cut downtime by up to 20%*
- Track events related to your drive throughout its entire life cycle
- Work in harsh environments

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Advanced technical documentation

Contextual guide that helps you fix issues



Online troubleshooting

Step-by-step procedure

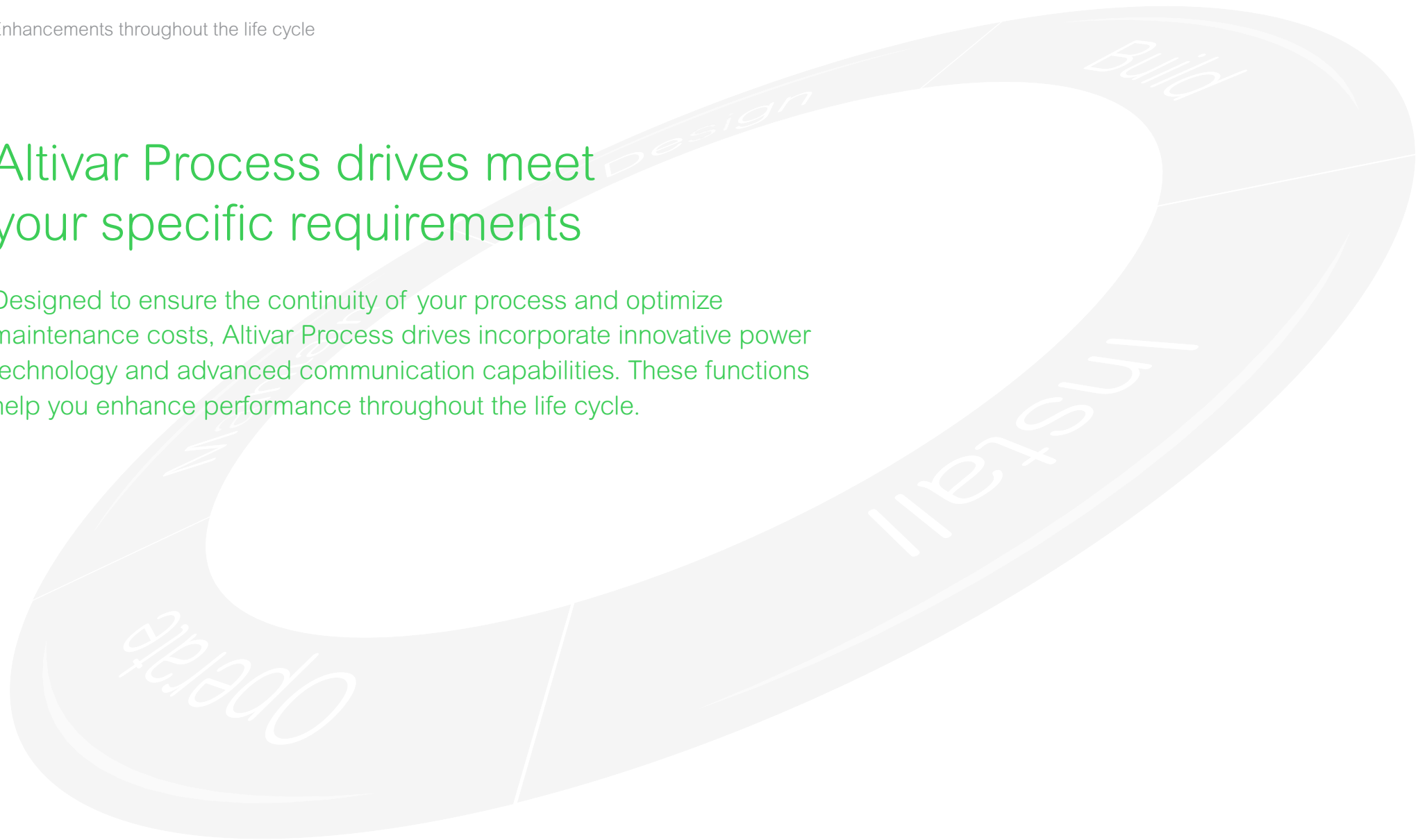


Customer Care Center

Automatic creation of technical support request with serial number and commercial part number

Altivar Process drives meet your specific requirements

Designed to ensure the continuity of your process and optimize maintenance costs, Altivar Process drives incorporate innovative power technology and advanced communication capabilities. These functions help you enhance performance throughout the life cycle.

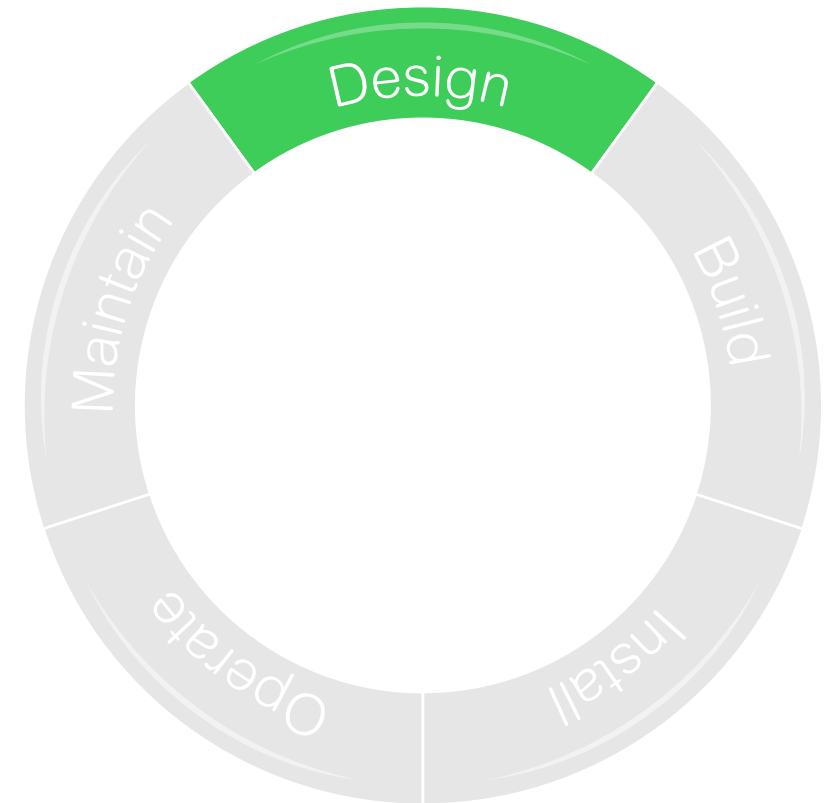


Save time on design of new projects and process upgrades

Schneider Electric is your partner in efficiency, with proven solutions to fit almost every installation.

Altivar Process drives offer compactness, openness, and collaborative engineering. In tandem with unmatched harmonic solutions, they allow you to deliver secured and correctly sized projects at optimized costs. Within the product range, there are several advanced cooling systems available to meet your needs.

What's more, from mechanical to architectural and harmonics-related issues, our experts support you all the way to define and size equipment according to process requirements and installation constraints.



Build efficient panels at the right cost – fast

Designed to make your life easier.

Thanks to highly advanced cooling systems with improved airflow management, Altivar Process drives offer the same compact footprint regardless of the protection level you require (IP23 or IP54). What's more, thermal qualities remain unaffected.

Dedicated function blocks, with graphical support, make the enclosures very easy to implement into PLC programs, and with colour-coded Romex wires and pluggable control terminals, cabling couldn't be easier.

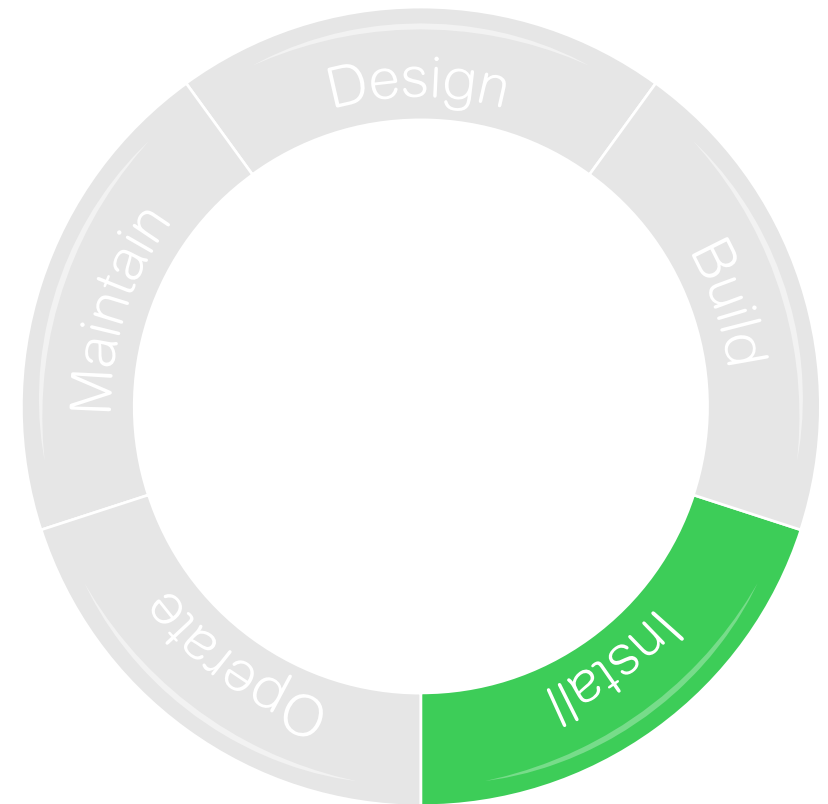


Install and run equipment easily, from any location

Commissioning is fast thanks to embedded FDT/DTM technology and an easy-to-use graphical interface for function settings.

Pump curves are easy to make and only require 5 points, via different user interfaces such as graphic display terminals and SoMove setup software for PCs. Simply download in open format for spreadsheet programs (CSV).

Thanks to direct access to all power and control terminals without restrictions, cabling is simplified.



Operate intuitively with real-time intelligence

Altivar Process drives enable you to save time on recording and tracking production details manually by automatically transforming basic data into process information. They make a significant difference with:

- User-friendly dashboards and visuals which simplify data analysis and decision-making processes
- Seamless integration into process architectures which provides real-time actionable data and an accurate view of the entire process to ensure Overall Equipment Effectiveness (OEE) follow-ups and detection of critical conditions before they escalate
- Compatibility with Process Expert System (PES) architectures and Modicon™ M580 controllers which enhance process performance
- Key performance indicators (including specific energy consumption) which help you identify required adjustments in order to ensure sustainable efficiency



Choose the right maintenance approach to avoid costly downtime

Condition-based monitoring brings a simple answer to maintenance challenges as it enhances both energy and asset management. Altivar Process drives offer condition-based monitoring and maintenance for your assets through:

- Pump efficiency monitoring. Simple implementation and immediate recognition of best efficiency point (BEP), allowing you to operate at optimized energy efficiency while increasing equipment availability.
- Generation of reliable, actionable, and relevant information. Determine optimum timing and frequency of maintenance to avoid arbitrary scheduling and drift tracks.
- Real-time intelligence. You can access your assets anytime, anywhere. The embedded web-server interface – using the latest HTML5 technology available via Ethernet – allows you to monitor processes with your daily working tool. No software required.
- Predictive maintenance. Planned actions to reduce efforts and labor costs.



Stay ahead of your competition

Altivar Process variable speed drives help you meet challenges and optimize both business and process performance. They have a direct impact on profitability and efficiency within key segments of industry.



Water and Wastewater
(WWW)



Food and Beverage
(F&B)



Oil and Gas
(O&G)



Mining, Minerals, and Metals
(MMM)



Water and Wastewater

Make water and wastewater management efficient, productive, and green

Only 0.3% of our global water resources can be used as clean drinking water and the energy to provide it accounts for 30-50% of total operating costs. In a world of water scarcity, implementing intelligent systems to process data can lead to improved efficiency and better management of water usage.

Altivar Process drives offer the following dedicated features for WWW processes:

- Process monitoring for timely and informed decisions
- Energy management for better energy awareness and sustainable performance
- Asset management to protect the system and its service life time
- Access from everywhere in accordance with rights and security as per ISA Secure / Achilles

Reduce your energy consumption
by up to **30%***

Increase operational efficiency
by up to **25%***

Reduce total cost of ownership
by up to **20%***



* Based on previous data. Not a guarantee of future performance or performance in your particular circumstances

A man in a white lab coat, hairnet, and white cap is inspecting a white box in a food and beverage factory. He is looking down at the box with a focused expression. In the background, there are rows of white boxes on a conveyor belt, and other workers in similar attire are visible. The scene is brightly lit, suggesting a clean and professional environment.

Food and Beverage

Increase your production output and save energy

In an industry with increasingly tough competition, food safety regulations, and consumer pressure for sustainable products, F&B companies must increase their production outputs, while controlling operation, maintenance, and energy costs.

Altivar Process drives offer dedicated features for F&B processes:

- Condition-based monitoring for waste and downtime reduction and protection of your system/equipment
- Energy management to optimize operating conditions and avoid energy penalties
- Seamless integration into plant architectures and advanced capabilities for improved operations flexibility
- Traceability allows data logging and recording capability to manage information on all drive events

Reduce your energy consumption
by up to **30%***

Reduce waste
by up to **80%***

Safeguard
your brand through
better safety compliance



* Based on previous data. Not a guarantee of future performance or performance in your particular circumstances



Mining, Minerals, and Metals

Maximize production, overall efficiency, and asset utilization

As commodities remain volatile, increasing efficiency across your supply chain is critical. Sustainability concerns, high energy costs, and a limited talent pool are adding to the constraints. Investing in technology to drive productivity is becoming a business necessity. Altivar Process drives offer the following dedicated features for MMM processes:

- Predictive maintenance to manage machinery and help prevent workplace injuries or unplanned downtime
- Real-time intelligence with accurate diagnostics, remote control, and remote services capabilities (thanks to embedded Ethernet web server systems) make your process safer and more efficient for a stronger ROI
- Best application performance with multi-drive complete solutions for process cranes, roller conveyors, vertical roller mills, and others

Reduce your energy consumption
by up to **30%***

Reduce
CO₂ emissions

* Based on previous data. Not a guarantee of future performance or performance in your particular circumstances



Oil and Gas

DANGER 70

PATENT NO

100

Make your process safer, more reliable, and more productive

As energy demands grow and environmental and safety regulations increasingly impact O&G companies, energy efficiency is key. Energy-efficient operations enjoy greater safety, security, and reliability while saving costs.

O&G companies need intelligent solutions to monitor, control, and optimize their assets. Altivar Process drives offer dedicated features for O&G operations:

- System condition-based monitoring allows alignment of raw data with key performance indicators for sustainable, operational efficiency
- Energy management solution to maintain a system operating at its best efficiency point
- Advanced asset condition diagnostics to optimize predictive maintenance strategies
- User-centric design for actionable information on process safety and operating profitability

Cut engineering and commissioning
by up to **30%***

Enhance safety for people, environment, and processes
by up to **30%***



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A sustainable drive for any application

Altivar Process drives carry the Green Premium ecolabel, ensuring an improved environmental footprint and compliance with key regulations.

Altivar Process drives' green credentials include:

- Green and ethical materials - free of PVC, halogen, and conflict minerals.
- Improved serviceability and repairability
- Increased recyclability: the product is now 80% recyclable.
- Packaging reduced by 64%
- Energy savings of up to 25%
- Easy to find environmental-impact information



A comprehensive range

	ATV600	ATV900	Drive Systems
Power ranges	0.75 – 315 kW		1 – 1500 kW
Voltage	200 – 400 – 690 V		
Protection degree	IP21 – IP55		IP21–IP23–IP54
Motor type	Induction, PM, reluctance motor		
Motor control type	Open loop	Closed loop or open loop	
Braking	Braking resistor or regenerative drive		
Environmental protection	3C3 /3S3		
Operating temperature	-15°C – 50°C		Applied to your application
THDI	THDI < 48%	THDI < 48%	THDI < 5% THDI < 48%
Safety	STO SIL	STO - SS1 - SS2 - SOS - SLS - SMS - SBC - SDI up to SIL3 Ple	
Embedded functions	Multi-pump	Master slave (speed or torque), load sharing, artificial lift control	Engineered to order

For more information about Altivar Process drives,
visit schneider-electric.com/drives

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