



Altivar Process variable speed drives

Your process deserves more than just a drive.

www.schneider-electric.com/drives

Life Is On

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Altivar Process – the smart, connected variable speed drive

The next generation of variable speed drives, Altivar Process is designed to deliver IIoT benefits. A smart, connected **EcoStruxure-ready Drive** with built-in intelligence to gather data and share information to the enterprise level, the Altivar Process can improve operational efficiency, profitability and reduce total cost of ownership (TCO).

As the only range on the market providing a common platform from 0.75 kW to 20 MW in all voltages, Altivar Process is easy-to-use with a consistent experience for usability, functionality and performance, and the added value of peace of mind and flexibility delivered through Drives Services. 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.



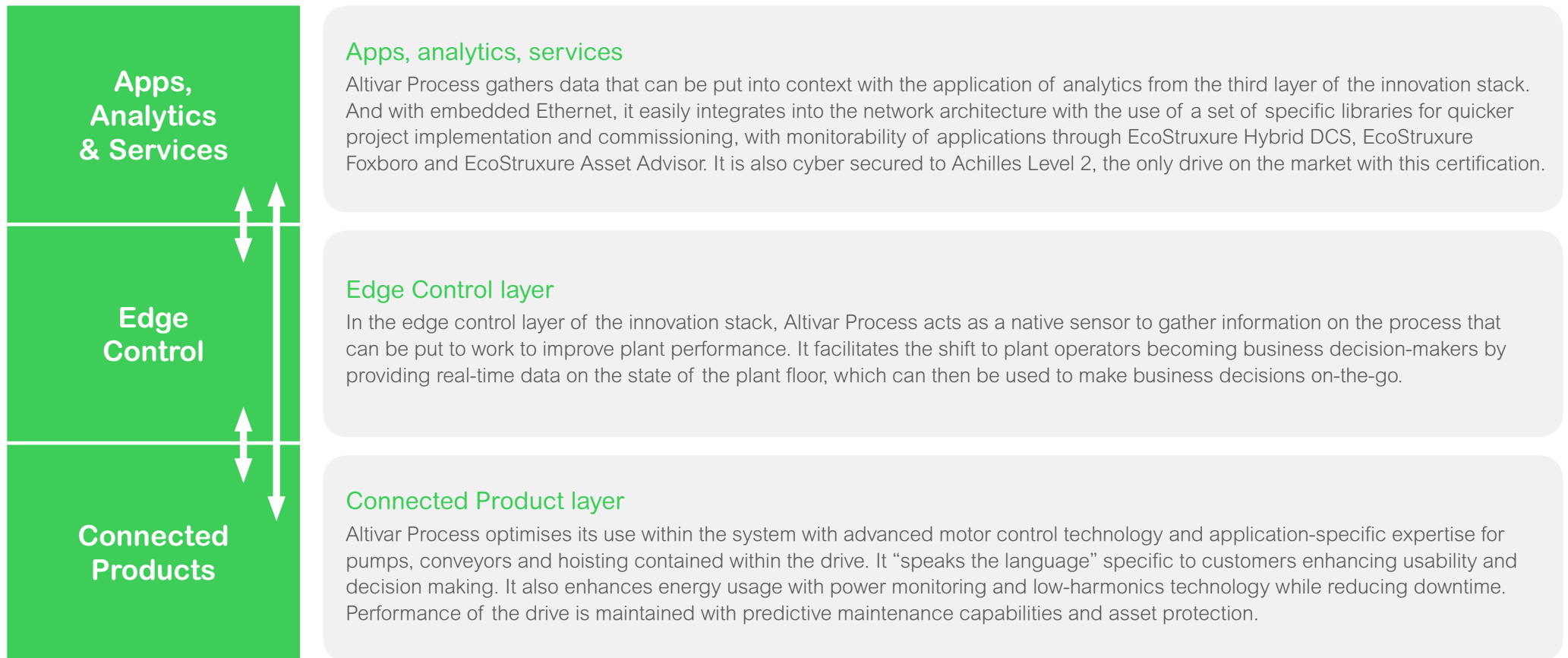
Connected products for smarter operations

Drives connectivity integrated at every level of EcoStruxure



Connected products for smarter operations

EcoStruxure is Schneider Electric's open, interoperable, IoT-enabled system architecture and platform. At the heart of EcoStruxure for industrial customers, Altivar Process delivers innovative value through the three layers of the stack:



Delivering measurable benefits:

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.

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

Up to
20%
improved
productivity*

Up to
30%
energy savings
(compared with direct
line motor starters)*

At least
20%
less electrical
consumption*

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



Process optimization

A future proof, IIoT-enabled solution

Altivar Process bring intelligence to your system by enabling your assets to provide advanced process data for smarter operations. Save time and exploit the full range of capabilities of your equipment on a single platform:

- EcoStruxure Hybrid DCS and Modicon™ M580-compatible, enabling use of specific libraries for quicker product implementation and commissioning
- DTM library and application function blocks provide full programming and diagnostic functions
- EcoStruxure Asset Advisor uses the drive as a super sensor for predictive maintenance



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

Enhance equipment effectiveness

Altivar Process helps you improve your productivity and availability by up to 20%*, thanks to:

- Application expertise to boost efficiency – Increase efficiency using dedicated functions such as M/S torque sharing for conveyors, backspin control for PCP/ESP and optimized energy for multi-pump boosters
- Maximized performance and production output – Ensuring sustainable operation efficiency through making necessary adjustment in case of best efficiency point (BEP) deviation
- Our IIoT-enabled EcoStruxure solution – Provides compatibility and easy integration with Process Expert System (PES) architectures, Modicon M580 controllers, and Foxboro EVO DCS systems thanks to native Ethernet, embedded webserver and dtm/faceplates



Energy management

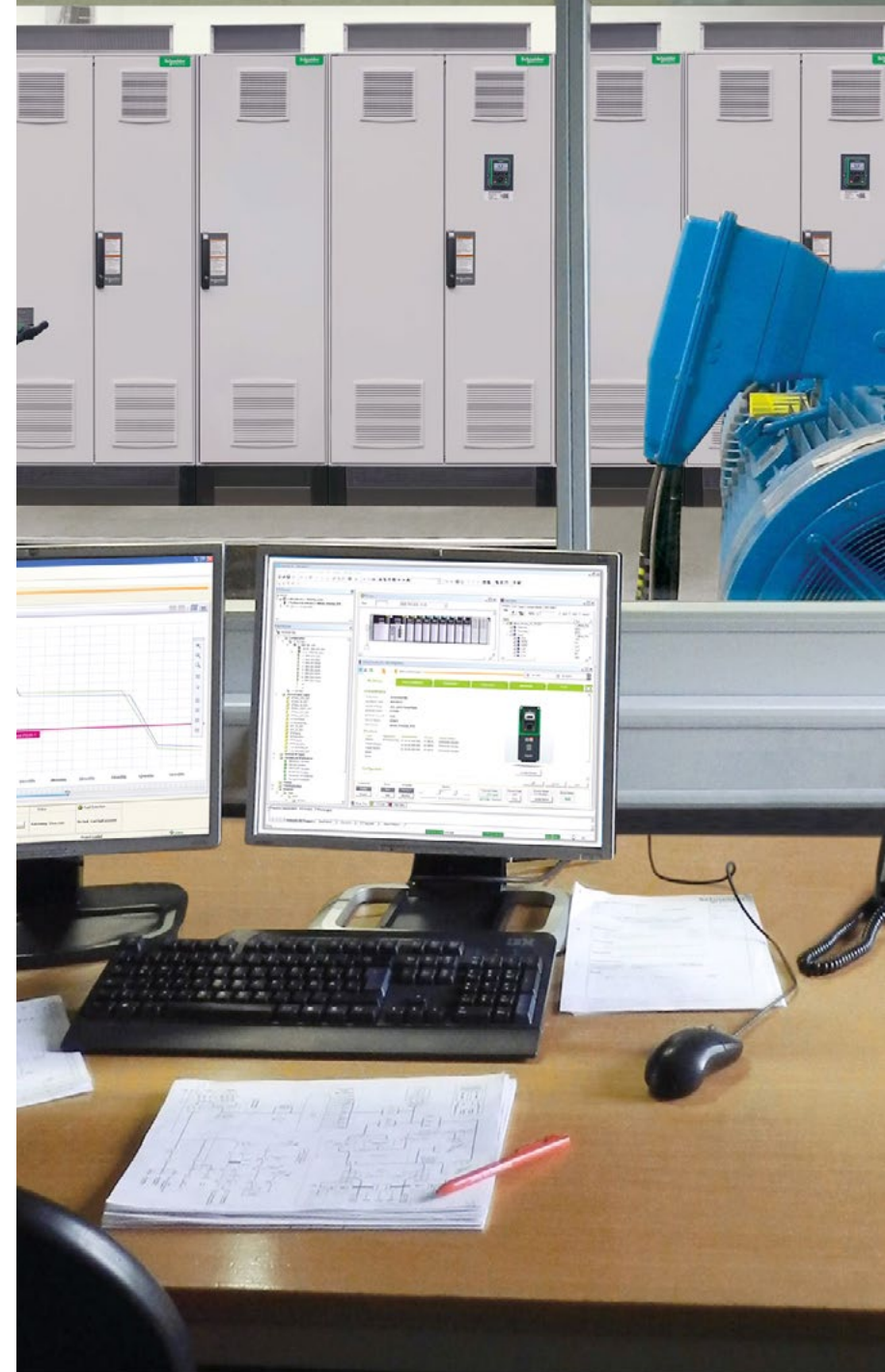
Altivar Process can help you optimize and reduce your energy consumption by up to 30%*, thanks to:

Better usage of energy

- Embedded power management with <5% measurement error
- Key performance indicators and lifetime monitoring on energy usage
- Smart data collection and access to real-time energy information
- Unprecedented 0 harmonics technology with 3-Level design common mode suppression
- Regen and DC Bus Sharing Features for Demanding Applications

Measure, analyze, and improve energy use

- Single system of records permitting timely analysis and reporting
- Warning through alarm management system when power drift is detected
- Real-time data enables reduced energy consumption by up to 30%*

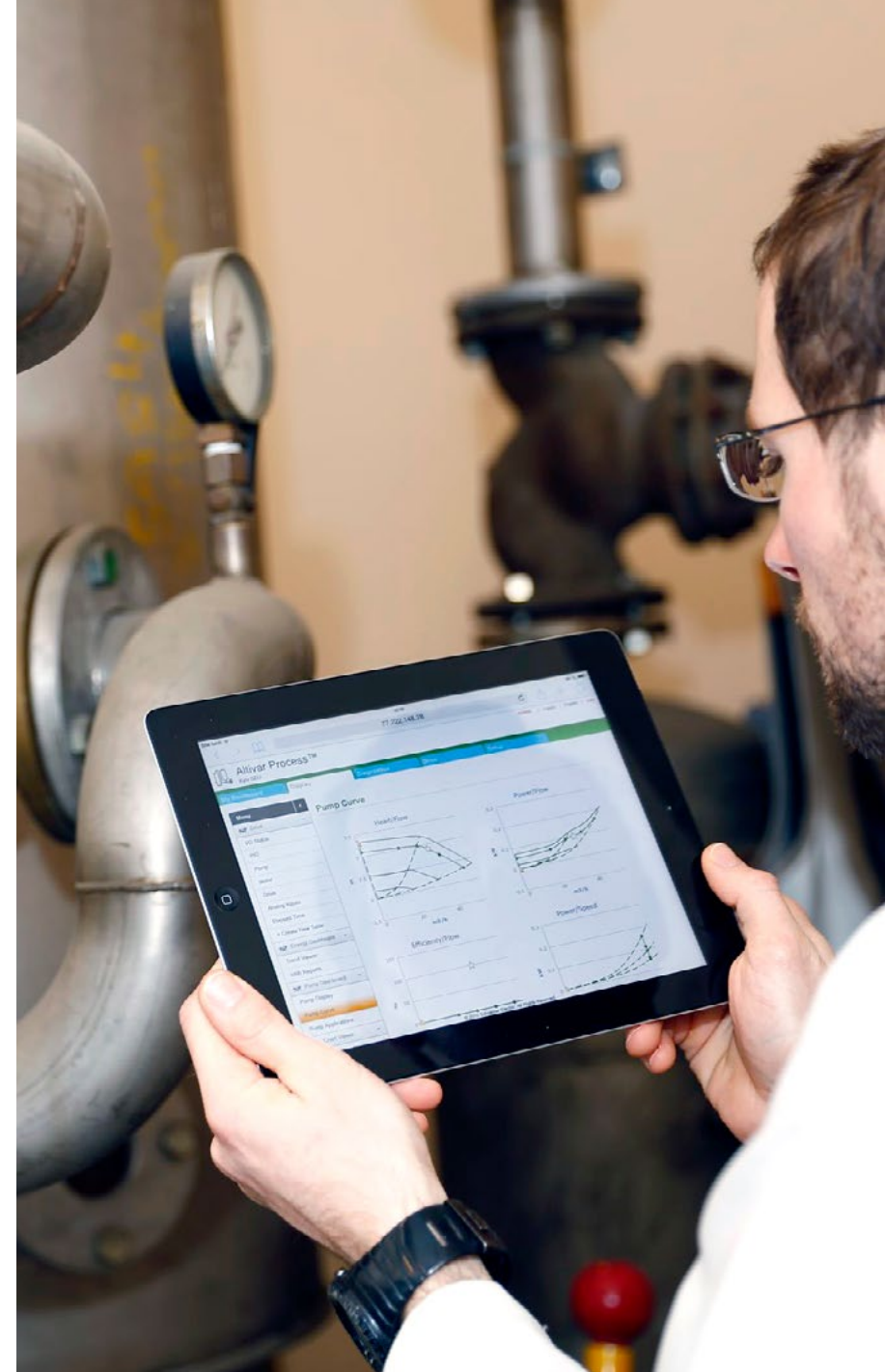


Asset management

Altivar Process can enhance your asset management by 20% with:

Downtime reduction

- Dedicated motor & process asset protection functions like anti-jam function; dry running protection; pump cyclic protection, backspin for PCP/ESP and more
- Detailed analysis of errors with time stamp logging
- Multi-drive architecture over Ethernet for continuity of services
- Enhanced drive ruggedness for severe conditions



Smarter maintenance

- Reduced process downtime with augmented reality for operators for easy troubleshooting thanks to the dynamic QR code and spare part strategy
- Predictive maintenance – advanced diagnostic data available from the drive to be used in the EcoStruxure Asset Advisor

Faster intervention and optimized management of spare part stock

- Altivar Process Modular design offers you simple parts replacement, quicker maintenance and minimized spare part stock references.
- Easily exchangeable components such as identical power modules with wheel and reduced weight and power fan inside a drawer accessible from front face
- Optimized number of spare parts to ensure fast on-site intervention



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)



Consumer Packaged Goods
(F&B)



Mining, Minerals, and Metals
(MMM)



Oil and Gas
(O&G)

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 the rights and security (as per ISA Secure / Achilles)
- Dedicated multi-pump applications functions for Lift and Booster stations that optimize the specific energy

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

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

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



[Learn More](#)

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

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



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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



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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
- Functionalities for upstream downtime reduction and gain on production capability

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

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



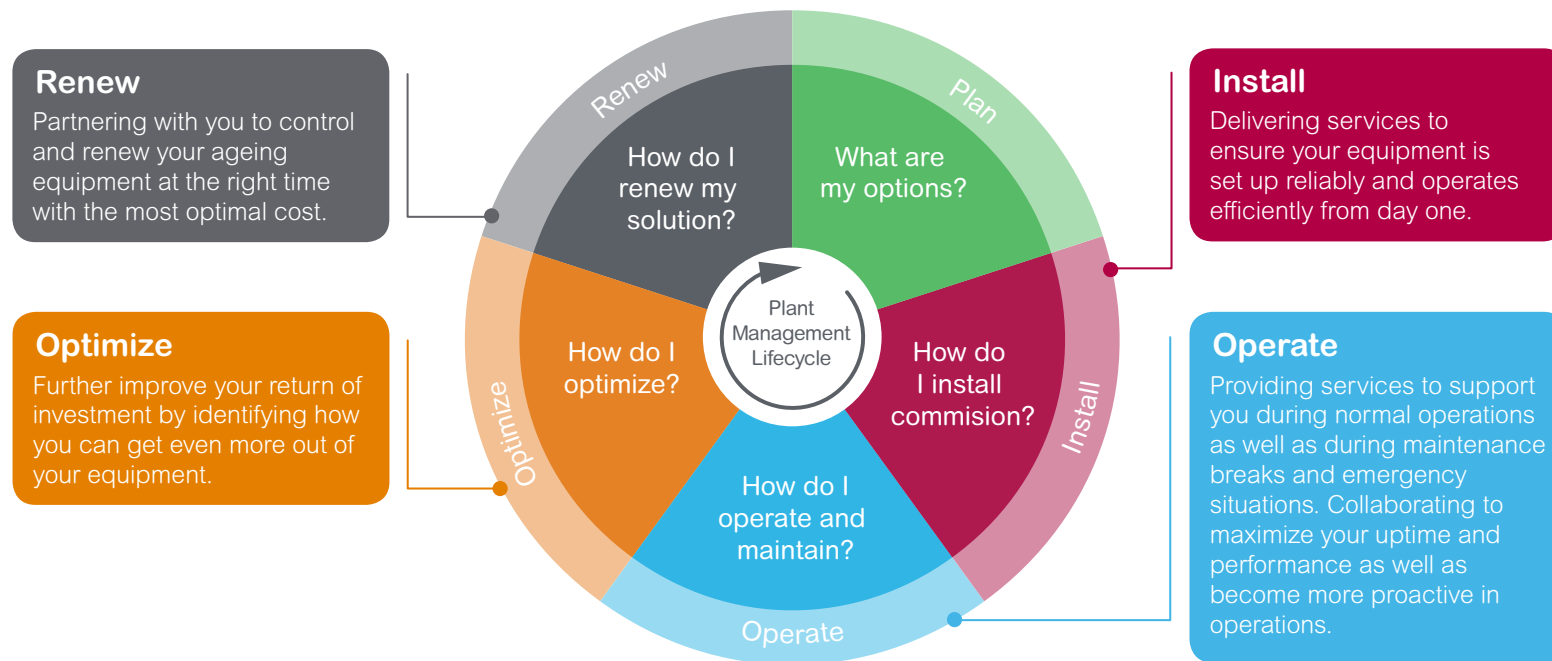
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Services for your drives

Through our Drives Services you can maximize your business infrastructure to meet increasingly stringent demands on productivity, safety, equipment availability, and performance optimization. With Schneider Electric Drives Services, we can:

- Deliver availability and reliability of your installation over the long term
- Help control your maintenance costs
- Keep your process running at peak performance for maximum efficiency

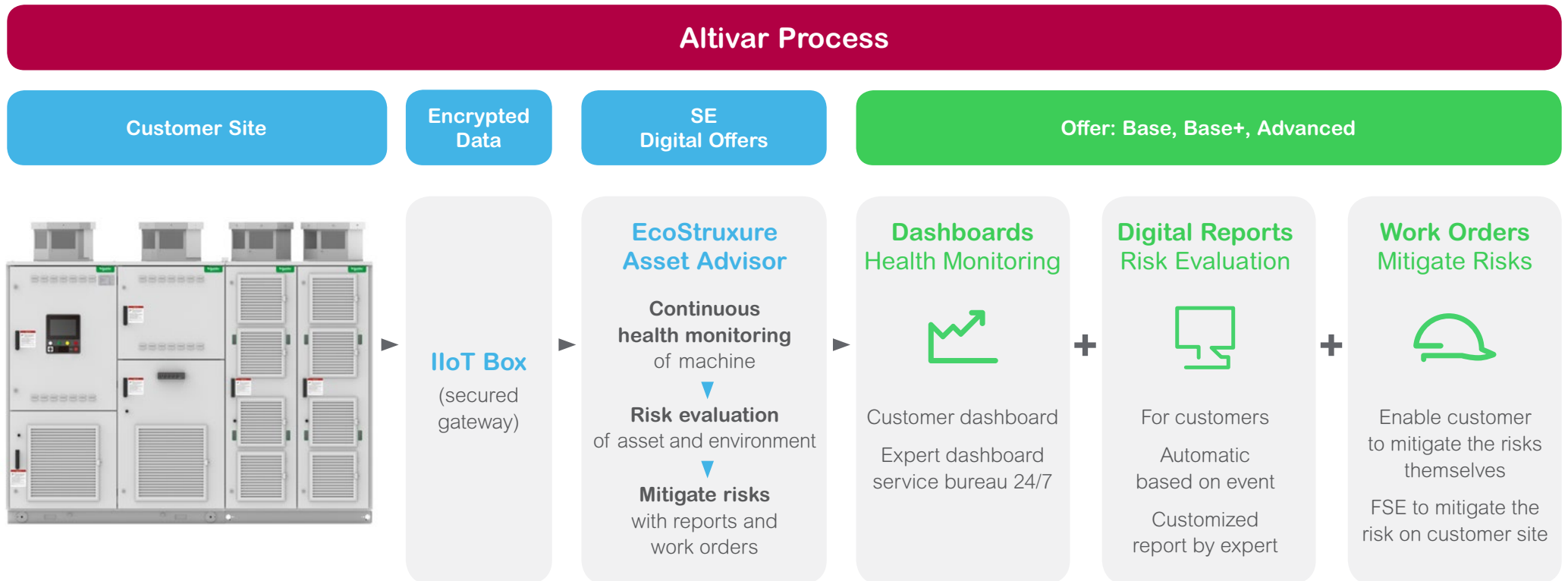


Enjoy reliable asset performance management

Digital services

Working together, the ATV6000 and EcoStruxure Asset Advisor provide advanced predictive maintenance.

Altivar Process



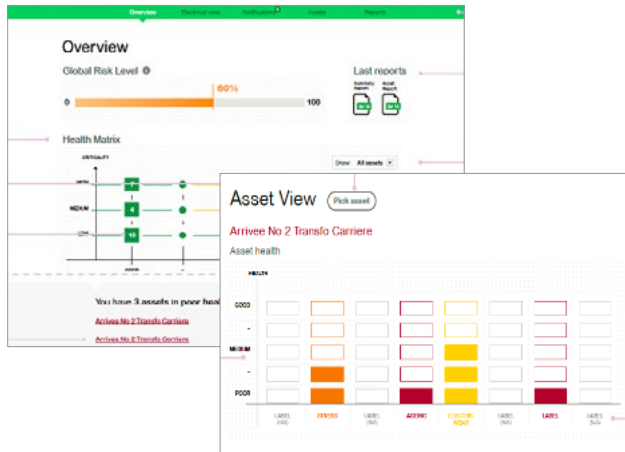
Get to know EcoStruxure Asset Advisor

Digital services

Improve operation and maintenance of your installation, boosting productivity and user safety, with EcoStruxure.

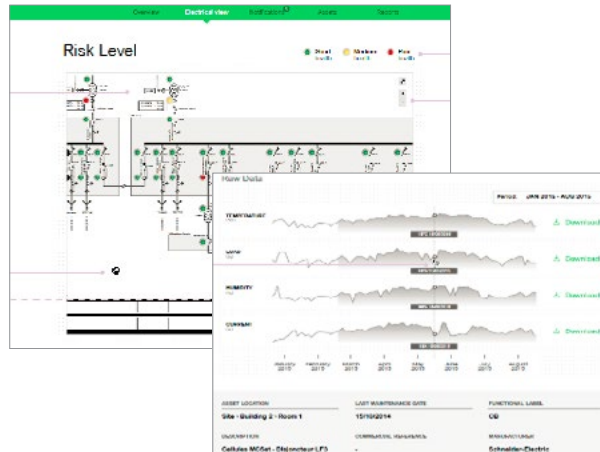
Continuous Health Monitoring

Health monitoring of asset (drive, transformer, MCB, motor) by level of stress and aging



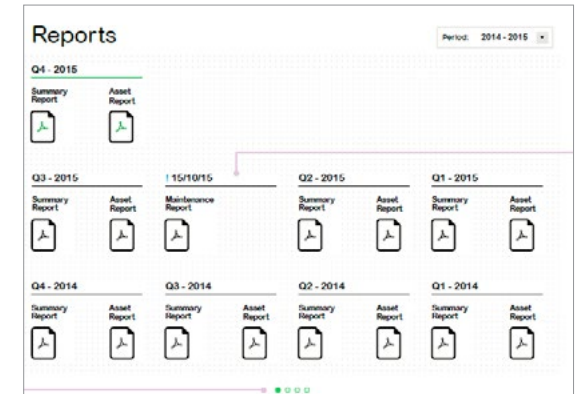
Risk Evaluation

Looking at asset and environment to constantly evaluate the level of risk



Mitigate Risks

With reports to customers, service bureau, and filed service experts



Extensive Drive range for End User processes


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A common range of Drives with features that deliver innovations to boost connectivity and user experience across Industrial applications.

	ATV600	ATV900	ATV6000
Power Ranges	0,75 – 1200 kW		0.3 MW – 20 MW
Voltage	200 – 400 – 690 V Three-phase		2.4 kV – 13.8 kV
Motor Type	Induction, PM, Reluctance, IE2-IE3-IE4 motors		Induction and PM motors
Motor Control Type	Open Loop	Open and Closed Loop	Open Loop
Braking		Braking resistor or regenerative drive	
THDI	THDi <%48, THDi <%5		
Embedded Functions	<ul style="list-style-type: none"> • Pump efficiency tracking • Multi Master-Slave Pump management • Pump and pipe protection • Fan Management • >95% Accurate Energy consumption measurement 	<ul style="list-style-type: none"> • Master-slave load sharing • Hoisting management • High accuracy torque control • Embedded dual-port Ethernet • Advanced Safety 	<ul style="list-style-type: none"> • Pump efficiency tracking • Pump and pipe protection • Fan Management • >95% Accurate Energy consumption measurement
Safety	STO (SIL3)	STO - SS1 - SS2 - SOS - SLS - SMS - SBC - SDI (SIL3 Ple)	
Typical Applications	Fluid & Gas Applications: <ul style="list-style-type: none"> • Water & Waste Water applications • Centrifugal and volumetric pumps • Compressors • Fans • Energy efficiency 	Demanding Industrial Applications: <ul style="list-style-type: none"> • Hoisting • Artificial Lift • Extruders, crushers • Conveyors, mills • DC Bus Sharing/ 4 Quadrant applications 	Industrial Applications: <ul style="list-style-type: none"> • MMM Long-distance conveyor • MMM Slurry pump • WWW Raw water pump • WWW Lifting station • O&G Crude oil transfer pump • O&G Pipeline compressor • Power Plant - Feed water pump • Power Plant - ID/FD fans

Offer Ranges	Wall-mounting ATV630 / ATV930	Wall-mounting High Protection Degree ATV650 / ATV950	Cabinet Integration ATV600 / ATV900	Compact Drive Systems ATV660 / ATV960	Drive Systems ATV660 Low Harmonic ATV960 Regenerative	Multidrive Systems ATV990	Medium Voltage Drive Systems ATV6000
Voltage	Three-phase: 200...240 V Three-phase: 380...480 V Three-phase: 500...690V	Three-phase: 380...480 V	Three-phase: 200...240 V Three-phase: 380...480 V Three-phase: 500...690V	Three-phase: 380...480 V Three-phase: 500...690V	Three-phase: 380...480 V Three-phase: 500...690V	Three-phase: 380...480 V Three-phase: 500...690V	2.4 kV – 13.8 kV
Power	0,75 kW to 75 kW 0,75 kW to 315 kW 0,75 kW to 90 kW	0,75 kW to 90 kW	0,75 kW to 75 kW 0,75 kW to 800 kW 0,75 kW to 1200 kW	0,75 kW to 800 kW 0,75 kW to 1200 kW	0,75 kW to 800 kW 0,75 kW to 1200 kW	0,75 kW to 800 kW 0,75 kW to 1200 kW	0.3 MW – 20 MW
Protection Degree	IP20/21 UL Type 1	IP55 UL Type 12	IP00	IP23 or IP54, UL Type 1 or 12	IP23 or IP54, UL Type 1 or 12	IP23 or IP54	IP31 standard up to IP42
Features	<ul style="list-style-type: none"> • Ready-to-use for easy integration inside or without an enclosure in an electrical room (IEC/EN60721-3 3C3-3S3, and -15...+50 °C) 	<ul style="list-style-type: none"> • Ready-to-use for easy integration in harsh environment and installations close to the system (IEC/EN60721-3 3C3-3S3, and -15...+50 °C) 	<ul style="list-style-type: none"> • Designed for easy and cost effective integration of drives into cabinets • Reduced downtime with easily changeable components such as power module with wheel and power fan inside a drawer accessible from front face 	<ul style="list-style-type: none"> • Fully customizable drive systems with modular concept • Ready-to-use and tested at full load • Tailored for application needs • Less space required in the control room thanks to compact design 	<ul style="list-style-type: none"> • Fully customizable drive systems with modular concept • Ready-to-use and tested at full load • System approach to managing harmonics. ATV680 is the low harmonic solution for pumping and general purpose • Applications and ATV980 for low harmonic and regenerative applications • Reduced losses, extended motor-lifetime and ~2 % THD(i) with 3-level technology 	<ul style="list-style-type: none"> • Fully customizable drive systems with modular concept • Ready-to-use and tested at full load • MultiDrive with simple, modular common DC-bus architecture • Rectifier unit or active Front End unit 	<ul style="list-style-type: none"> • Fully customizable drive systems with modular concept • Ready-to-use and tested at full load • Tailored for application needs

MV drive systems

2.4 kV – 13.8 kV
0.3 MW – 20 MW



**ATV660/680 and
ATV960/980/990
LV drive systems**

200 V – 400 V
0.75 kW – 800 kW



**ATV630/650 and
ATV930/950
LV drive products**

200 V – 400 V
0.75 kW – 315 kW

E House



Custom design



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

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