

Altivar Process

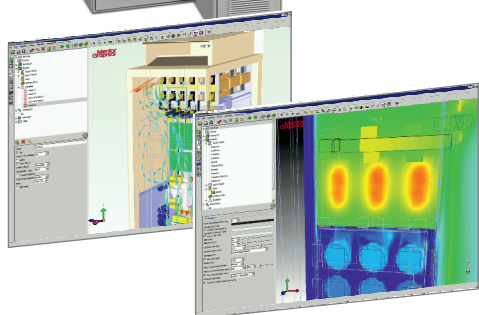
ATV660 Compact Drive Systems



The customized solution for your drive

"Ready-to-use" Drive Systems:

- + Developed on highest quality level
- + Manufactured according to your needs
- + Tested at full-load operating conditions
- + Pre-set appropriate to the design



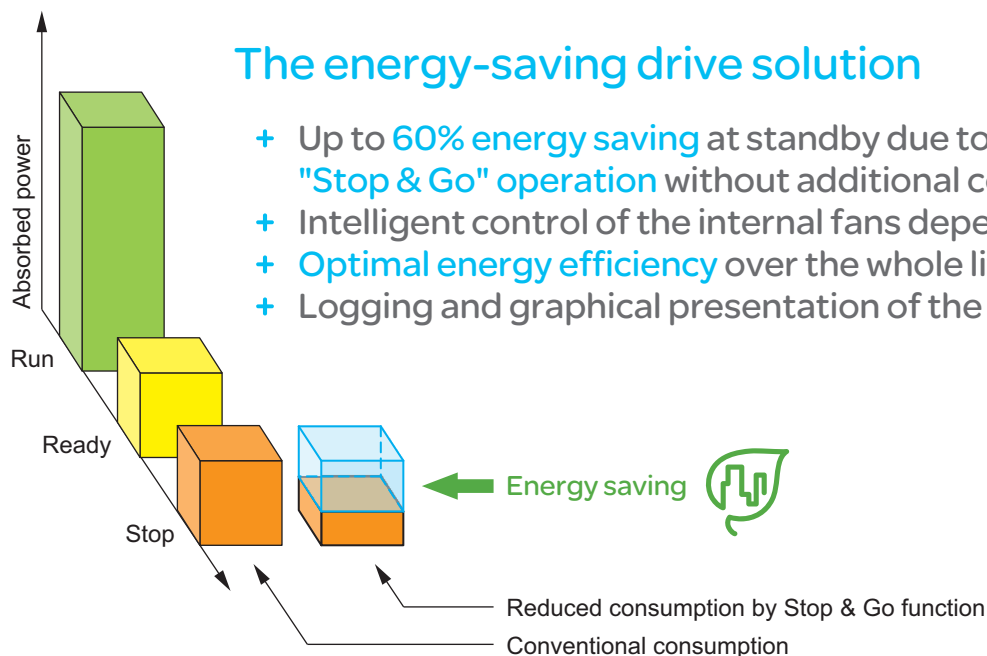
Compact dimensions

- + Low space required in the control room
- + Generous connecting area for the power cables
- + Easy accessibility of all components
- + Control panel for numerous options



The energy-saving drive solution

- + Up to 60% energy saving at standby due to the innovative "Stop & Go" operation without additional costs
- + Intelligent control of the internal fans depending on the operation
- + Optimal energy efficiency over the whole life cycle
- + Logging and graphical presentation of the absorbed power



ATV660 – Compact Drive Systems



Frequency inverter as enclosure unit for speed control of asynchronous and synchronous motors.

Concept

The concept of the ATV660 Compact Drive Systems offers standard enclosures ready to connect. The modular construction makes it possible to adapt the enclosure unit to the individual requests. This economic enclosure variant makes the planning easy and supports a quick installation and commissioning of the drive.

Power versus overload

For optimum adaptation to the application you can select between two overload models when dimensioning the Altivar Process Drive System.

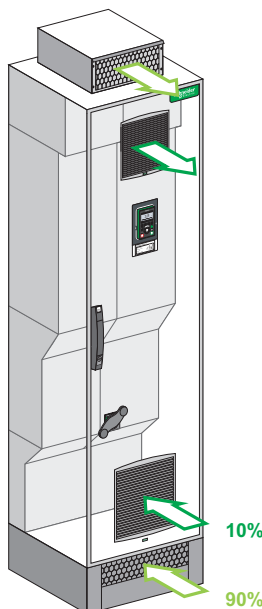
- Normal duty
High continuous power with an overload capability of 10 % (typically pumps and fans)
- Heavy duty
Reduced continuous power but increased overload capability of 50 % for drives with enhanced requirements regarding overload capability, starting torque, load impacts and control performance (typically compressors, mixers, rotary blowers).

Basic equipment

The basic equipment contains frequency inverter modules, semiconductor fuses, a main switch, a line reactor to reduce the harmonics, a dv/dt filter choke (from 355 kW) for protection of the motor and spacious mains and motor bars for connection of the power cables. The design is based on the standard enclosure system Spacial SF with an graphical operating panel integrated into the enclosure door.

The control is located on a spacious control panel. It provides compact dimensions, nevertheless it is enough space for additional extensions and accessibility in case of maintenance.

Device features



Enclosure system

The enclosure system Spacial SF with additional internal reinforcement elements and clearly specified cooling air channel provides optimal cooling of the built-in frequency inverter modules and maximum compactness at the same time.

Cooling concept

The power part components are cooled in a separate cooling air channel. Via this channel about 90 % of the heat losses are exhausted. The interior of the enclosure is cooled via fans in the enclosure door.

When using the option "Increased protection degree IP54" the separated air supply for the power part takes place through the enclosure plinth.

Connection

The power cables are connected on the mains side and motor side to spaciouly dimensioned bars. The strain relief of the cables is realized via an own bar with solid metal clamps. Each device is equipped with an EMC screen bar for correct shield connection. At the standard design, the cables are to be connected at the bottom.

Enclosure Design 400 V

ATV660 - General technical data		
Mains voltage	3 AC 380 V -10 % ... 415 V +6 %, 50/60 Hz ± 5 % for TT, TN-C or TN-S Other voltages and other types of mains possible – ETO	
Maximum current	Normal duty (ND): 110 % for 60 s per 10 minutes Heavy duty (HD): 150 % for 60 s per 10 minutes	
Ambient temperature	-10...+50 °C (below 0 °C with option enclosure heating, above +40 °C with derating)	
Standard equipment	Enclosure system Spacial SF in RAL 7035, protection degree IP23, graphical operating panel in the enclosure door, frequency inverter including main switch, line reactor (< 48 % THDi), mains and motor terminals, cable entry from bottom	
Interfaces	Pluggable control terminals, fieldbus connection via Ethernet or Modbus	
Options "Light ETO"	- Increased protection degree IP54 - Enclosure plinth for basic device - Connection enclosure cable from top/bottom - Enclosure lighting - Enclosure heating - Key switch "local/remote" - Ethernet port on front door - Digital and analog I/O card - Relay output card - Communication cards for various fieldbus systems - STO - SIL 3 Stop category 0 or 1 - Front display module (FDM) - Indicator lamps on front door - Motor temperature monitoring - Bearing temperature monitoring - dv/dt filter choke - Motor heating - Circuit breaker - Undervoltage coil for circuit breaker 230 V - Motor for circuit breaker 230 V - Automated mains disconnect - Setting for 415 V +10 % - Safety labels in local language	
Further design variations "ETO"	- Modified wiring colors - Remote monitoring - Seaworthy packaging - Differing mains voltages - Multipulse supply (12-pulse) - Design without main switch - Increased short-circuit strength (100 kA) - Air intake from back - Differing enclosure colors - Customized documentation - Customized labeling - Design for IT mains - Motor contactor ...	
Standards	CE, EAC, ATEX, RFI filter for second "industrial environment" C3 integrated	

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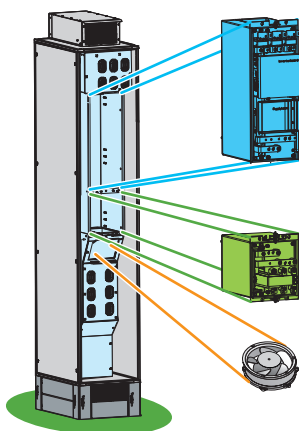
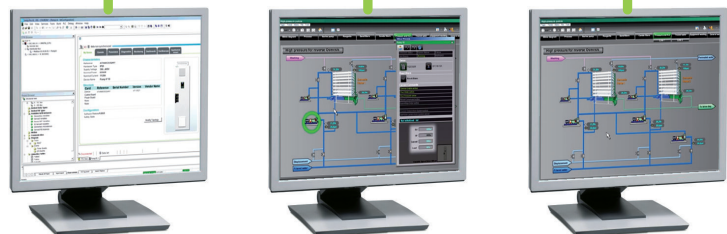


Perfect monitoring of your process

- + Integrated pump curves for process optimization
- + Monitoring of the **pump efficiency**
- + Notification of critical operating points **without additional sensors**
- + Process integration with pressure-, flow- and level-control including compensation of flow losses

Simple embedding into PLC environments

- + **Easy integration** thanks to standardized FDT/DTM and ODVA technology
- + Support by predefined libraries
- + Easy access via **PC, tablet** or **smartphone**
- + Secure connection via "**Cyber-secured Ethernet**"



Sophisticated service concept with QR code

- + **Modular design** allows easy logistics of spare parts
- + Optimized costs of maintenance due to **dynamic maintenance schedule** with integrated monitoring of the individual components
- + Simple exchange of power modules and fans
- + **Quick assistance** with dynamic QR codes and Customer Care App

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